



NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES
OF COPYRIGHTED WORKS

(CONTU)

Fifteenth Meeting
July 11-12, 1977

Room 2222
Rayburn Building
Washington, D. C.

BEFORE:

STANLEY H. FULD -- Chairman
Retired Chief Judge,
New York Court of Appeals
Special Counsel, Kaye, Scholer, Fierman,
Hays and Handler

MELVILLE B. NIMMER -- Vice Chairman
Professor of Law
UCLA Law School

MEMBERS OF THE COMMISSION:

Daniel J. Boorstin
Librarian of Congress

George D. Cary
Retired Register of Copyrights

William S. Dix
Librarian Emeritus
Princeton University

John Hersey, President
Authors League of America

Rhoda H. Karpatkin
Executive Director
Consumers Union

Dan Lacy
Senior Vice President
McGraw-Hill, Inc.

BIBLIOGRAPHIC DATA SHEET		1. Report No. CONTU 77-0007	2.	3. Recipient's Accession No.																		
4. Title and Subtitle TRANSCRIPT OF CONTU MEETING NUMBER 15			5. Report Date July 11-12, 1977																			
			6.																			
7. Author(s) National Commission on New Technological Uses of Copyrighted Works (CONTU)			8. Performing Organization Rept. No.																			
9. Performing Organization Name and Address National Commission on New Technological Uses of Copyrighted Works (CONTU) Washington, DC 20558			10. Project/Task/Work Unit No. Pub.L. 93-573																			
			11. Contract/Grant No.																			
12. Sponsoring Organization Name and Address Same as Box #9			13. Type of Report & Period Covered transcript of meeting held 7/11-12/77																			
			14.																			
15. Supplementary Notes																						
16. Abstracts Transcript includes testimony by Professor William J. Baumol on report done for CONTU on Economics of Property Rights as applied to Computer Software and Data Bases; Professor Fritz Machlup on Economics of Property Rights; Roy Saltman from the National Bureau of Standards Institute for Computer Sciences and Technology on copyright for computer data bases and software; Vernon Palmour on the economics of interlibrary loans and at what point it becomes more economical to subscribe than to photocopy; Bernard Fry on the CONTU sponsored study into the attitudes and practices of journal publishers on authorized photocopying; and Dr. Allen Ferguson and Bert Cowlan from the Public Interest Economics Center and the Public Interest Satellite Association respectively on "An analysis of computer and photocopying copyright issues from the point of view of the general public and ultimate consumer."																						
17. Key Words and Document Analysis. 17a. Descriptors																						
<table border="0"> <tr> <td>Copyright</td> <td>CONTU</td> </tr> <tr> <td>Photocopying</td> <td>Property Rights, economics thereof</td> </tr> <tr> <td>Computers</td> <td></td> </tr> <tr> <td>Software</td> <td></td> </tr> <tr> <td>Automated Data Bases</td> <td></td> </tr> <tr> <td>Economics</td> <td></td> </tr> <tr> <td>New technological uses of copyrighted works</td> <td></td> </tr> <tr> <td>Reprography</td> <td></td> </tr> <tr> <td>Journals</td> <td></td> </tr> </table>					Copyright	CONTU	Photocopying	Property Rights, economics thereof	Computers		Software		Automated Data Bases		Economics		New technological uses of copyrighted works		Reprography		Journals	
Copyright	CONTU																					
Photocopying	Property Rights, economics thereof																					
Computers																						
Software																						
Automated Data Bases																						
Economics																						
New technological uses of copyrighted works																						
Reprography																						
Journals																						
17b. Identifiers/Open-Ended Terms																						
17c. COSATI Field/Group																						
18. Availability Statement IMMEDIATE AVAILABILITY			19. Security Class (This Report) UNCLASSIFIED																			
			20. Security Class (This Page) UNCLASSIFIED																			
			22. Price PC A13 / MF 401																			

MEMBERS OF THE COMMISSION (Cont'd.)

Arthur R. Miller
Professor of Law
Harvard Law School

E. Gabriel Perle
Vice President - Law
Time, Inc.

Barbara Ringer (nonvoting)
Register of Copyrights

Hershel B. Sarbin
President
Ziff-Davis Publishing Company

Robert Wedgeworth
Executive Director
American Library Association

Alice E. Wilcox
Director
MINITEX

PROFESSIONAL STAFF OF THE COMMISSION

Arthur J. Levine
Executive Director

Robert W. Frase
Assistant Executive Director/
Economist

Michael S. Keplinger
Senior Attorney Director/

Christopher Meyer
Staff Attorney

Jeffrey L. Squires
Staff Attorney

Carol A. Risher
Information Officer

Dolores K. Dougherty
Administrative Officer

David Peyton
Policy Analyst

- C O N T E N T S -

Statement of:	P a g e
Dr. Fritz MACHLUP, Professor of Economics Princeton and New York Universities	3
Dr. William C. BAUMOL Professor of Economics Princeton and New York Universities	19
Dr. Yale Braunstein New York University	34
Koy G. SALTMAN Institute for Computer Sciences and Technology National Bureau of Standards	67
Vernon E. PALMOUR CONTU Contractor	112
Dr. Bernard FRY Dean, Graduate School of Library Science Indiana University	148

NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS
(CONTU)

Tel: (202) 557-0996

Washington, D.C. 20558

AGENDA

FIFTEENTH MEETING
JULY 11-12, 1977

~~UNITED STATES PATENT OFFICE~~
~~LIBRARY OF CONGRESS~~
WASHINGTON, D. C.

2222 RHOB

Monday, July 11, 1977

10:00 - 11:00

Roy G. Saltman, Institute for Computer Sciences and Technology, National Bureau of Standards, Project Director for a "Policy Oriented Analysis of the Interaction of Law, Economics and Technology in the Use of Copyrighted Works in Automated Scientific and Technical Information Systems." Briefing on the final project report covering recommendations regarding copyright for computer data bases and software.

11:00 - 12:00

William G. Baumol, Professor of Economics, New York University and Princeton University. Briefing on contract report on the "Economics of Property Rights as Applied to Computer Software and Data Bases." The briefing will summarize the contractors research on the economic factors regarding copyright protection in the new technologies.

12:00

Lunch.

2:00 - 3:00

Fritz Machlup, Professor of Economics, Princeton University and New York University. Briefing on economic factors involved in royalty payment mechanisms.

3:00 - 4:00

Vernon E. Palmour, CONTU contractor, will discuss his revision of a study of the economics of inter-library loan and at what point it is more economical to purchase new materials or subscriptions rather than photocopy.

4:00 -5:00

Bernard Fry, Dean, Graduate School of Library Science, Indiana University, will present the results of a study on the attitudes of journal publishers on the licensing of photocopying or providing authorized copies.

Tuesday, July 12, 1977

9:30

Reports By:

Allen Ferguson, President, Public Interest Economics Center (PIE-C) and Bert Cowlan and Andrew Horowitz, Co-Directors, Public Interest Satellite Association (PISA) on "An Analysis of Computer and Photocopying Copyright Issues from the Point of View of the General Public and the Ultimate Consumer." Mr. Ferguson will summarize the economic analysis conducted by PIE-C. Mr. Cowlan and Mr. Horowitz will discuss the results of the meetings of the public interest/consumer group meetings and present PISA's comments on the PIE-C final report.

JUDGE FULD: May I call this fifteenth meeting of CONTU to order.

The first person today to address us is Dr. Fritz Machlup. He is a noted authority on the Economics of Information. He is Professor Emeritus of Princeton University, and Professor of Economics at New York University. Dr. Machlup is the author of a large number of books and articles both in English and major European languages. Particularly, he is the author of: "The Production and Distribution of Knowledge ^{in the United States} /, which gave production ^{in the United States} rise to the widely used term of: "Knowledge Economy."

He is currently engaged in an extensive project to prepare a major revision of that work.

We welcome you, Professor.

DR. MACHLUP: Thank you, sir.

STATEMENT OF DR. FRITZ MACHLUP
PROFESSOR OF ECONOMICS
PRINCETON AND NEW YORK UNIVERSITIES

DR. MACHLUP: Judge Fuld and Members of the Commission. I have no prepared statement; all I brought with me is, perhaps, my mind, and a few notes which I took at another occasion. I must even confess that I have not read some of the publications that have come out of this Commission. I note from one of the Press releases that I probably should have read a research study on the question of creating a transaction-based royalty -

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 payment mechanism; and I should have read the discussion
2 on providing copyright protection in the employment of the
3 proliferating photocopying machines. Thus I am not troubled
4 with any knowledge of these documents.

5 Perhaps I should make a preliminary remark.

6 In my own considerations as an economist, I
7 never ask what anybody's 'right' is, because ^{neither I nor} this Commission
8 is here to find out what the rights are but to find
9 out what the rights ought to be under statutory law, or
10 under interpretations of such law. So I am not troubled
11 with any such notions ^{to} as/ who has a right.

12 Secondly, I am not influenced by

13 "technocrats" who come out with
14 new gadgets, and say, "You said that this can't be done,
15 it is too complicated. I have a way of solving this problem
16 quite easily".

17 I am not impressed, because I donot know
18 whether this problem ought to be solved. So, if someone
19 can come up with a new, wonderful machine, or a counter or
20 measuring rod of some sort, or a formula, this doesn't
21 impress me as long as I question the social desirability of that
22 kind of measurement. I have to know first whether this serves a good
23 purpose.

24 If I address myself to the question
25 of possible royalty payments for the

photocopying of copyrighted material, I ask

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 myself two questions:

2 1. Who pays for it, and who receives payments?

3 2. Do these payments and receipts serve a good
4 purpose from the point of view of society as a whole?

5 And by this/^{second question} I mean: Do they serve to promote
6 the progress of the arts and the sciences?

7 This, as you know, is the/^{relevant} clause of the
8 Constitution; and this is probably a very good reminder
9 that we are not to ask whether /^{a scheme} helps me, or you, or a
10 third person, but whether it helps the nation in its
11 interest/^{of} seeking adequate promotion of the arts and
12 the sciences.

13 We ask ourselves: Do the publishers
14 of journals lose much by the photocopying of their output
15 -- of the articles contained in their journals? Do they
16 lose so much that it would be a real disincentive to
17 publishing these journals at all?

18 That is probably the first question to ask. In
19 order to answer it, one has to know more about the
20 economics of journal publishing -- of which we know
21 rather little; and one would have to know how much
22 the loss of sales and subscriptions to these journals
23 would be if there were a wide use of photocopying
24 machines for free reproduction of the contents of
25 these journals.

There is very little empirical material for answering this question. I did see some relevant material that came out of the British experience with their National Lending Library; and I looked up what was really done there, and how many copies were asked of this or that article in this or that journal.

I was very much impressed by the fact that there were 1,288 copies ordered of articles in Science, the Journal of the American Academy for the Advancement of Science. This was the largest number taken from any journal. The circulation of Science was 154,200, at that time. Photocopying for British readers, therefore, amounted to less than one percent of the circulation. I do not believe that any of these people who asked for photocopies of particular articles would have become a subscriber to that journal or would have purchased the issue containing the interesting piece. My conclusion -- which is a casual empiricism, not based on conclusive evidence -- is that the loss to the A.A.A.S., the publishers of this journal, was nil!

One of the largest numbers of photocopies ordered was of the Scientific American: 630 copies were ordered,

and the circulation was at that time 500,700. That means that the photocopying was 0.12% of the circulation. Again, I doubt that any subscriptions or sales were lost to Scientific American by this proliferation of photocopying.

Even larger was the number of photocopies ordered of the Journal of Biological Chemistry: 784 copies. The circulation of that journal is 7,200. The loss -- the potential loss -- would be 1% but, again, I doubt that any one of those who asked for these photocopies would have subscribed to the journal.

I would like to hypothesize that very much of the photocopying that is done in American libraries is not of current issues but of past issues of journals. The publishers of these journals would hardly make much money by looking in their warehouse and pulling out a copy of a past issue for sale, if occasional orders of such back issues were actually received.

I could go on adding more of this kind of "anecdotal evidence" to reach the conclusion that the publishers of journals lost virtually nothing from the large amount of photocopying of articles printed in the journals they publish.

I come to the other part of this question: Who could pay, ultimately, the royalties if such payments were to become mandatory? Who would pay for it if photocopying became more expensive because of some royalty payments to be

made to the publishers of the photocopied journals?

Chiefly, I would say, students, professors, researchers.

I do not know whether they all would pay out of their own pocket. My hunch is that a great deal would come, ultimately out of public funds, because people who do a great deal of photocopying are usually researchers, and they may have grants, and these research grants are largely made by public organizations and foundations -- the National Science Foundation, the Ford Foundation, etc.

So, if they had to pay more for photocopying, that would be charged against these research grants or contracts; in effect the government would pay for it. I do not say that 100% would come out of the public coffers, but a considerable part probably would.

If this is so, what would a system that provided for royalty charges on photocopying articles from journals really amount to? It would amount to payments, coming partly out of the pockets of students and of professors who have no grants, partly out of the pockets of interested general readers, but largely out of public funds.

Where would the public funds come from? They would

come either from general tax revenues, or they would be at the expense of other uses of these public funds, for the largest part probably at the expense of productive uses of the research grants made. The funds would go to the publishers of the journals, without any proof whatsoever that the publishers of these journals really needed those revenues either for their survival or as an effective incentive to publish articles.

What is important here to realize is whether these payments would really constitute an effective incentive for the publication of meritorious articles that otherwise would remain unpublished and, therefore, not be disseminated. That is the question before all of us and, especially, before this Commission.

Permit me to make some comments regarding the mechanism of collecting and paying royalties. I do not know what kind of gadgetry would finally be developed, but I fear it might be a nuisance to the user; very often a potential reader of an article has it photocopied only because it is so convenient to have it for future reading and possible future reference. He may not even know precisely what he is photocopying or has others photocopying for him, he just prefers the photocopy to a stack of unread journals on his desk or shelf. However, if there were any trouble or nuisance connected with photocopying, he may say "The heck with it ! I won't read it !"

The result would be a definite decline in the dissemination of knowledge, and that would be a clear disadvantage of

the scheme. It would be "counterproductive" in that it would be against the very purpose of the copyright laws.

Judge Fuld and ladies and gentlemen: I should not take more of your time, but I would like to stress again that I realize that these are possible solutions to the problem of how one could collect royalty charges for photocopying and how one could arrange such payments going to the publishers. But, granted that this problem can be solved, I question that it is a problem that deserves to be solved. For it is merely a problem of how to steer some public funds to a group of people who, according to our knowledge, have thus far survived and probably will survive without the addition revenues from photocopying. There is no indication that they are actually losing a great deal of business -- sales and subscriptions -- through the proliferation of royalty-free photocopying.

This is the end of my very informal formal presentation. I am, of course, willing to answer any questions that are asked.

JUDGE FULD: Thank you very much. Yes, Mr. Lacy.

COMMISSIONER LACY: Dr. Machlup, suppose we accept the assumption that photocopying does not diminish the number of subscriptions to or purchasers of the original printed work. And we assume that a particular journal has, let's say, a thousand, or one could say 10,000--it doesn't matter--subscribers who subscribe to the journal, itself. And let's say 200, or 2,000 persons get photocopies of the journal.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 As we all know, the so-called first cost of
2 producing a limited-circulation scientific journal is
3 vastly higher than the incremental cost of reproducing
4 a copy. All thousand people who bought copies of the
5 printed work made a contribution to those first costs --
6 initial costs -- in addition to the incremental costs.

7 We are proposing that the 200 who had gotten the
8 photocopies would not make any contribution to that.

9 Now, I can readily see that one might use a
10 de minimus argument that there are so few, and it is so
11 difficult to collect the money, and the money is so small,
12 it is not worth doing.

13 But if we put that assumption aside, and assume
14 that there were convenient remedies, do you see any reason
15 why people who get it in the reprographic form should not
16 make the same contribution to the first costs that they
17 would if they were getting it in printed form?

18 DR. MACHLUP: Yes. A very strong reason!

19 The point is that, since the incremental cost --
20 the marginal cost -- is zero, it would be in the best
21 national interest that there be no cost to the one who
22 makes use of that knowledge.

23 COMMISSIONER LACY: Well, there is very little incremental
24 cost to the subscription.

25 Why should a subscriber pay anybody?

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 DR. MACHLUP: He does that only for his own
2 convenience. He is probably more interested
3 as a regular reader and a subscriber of that journal.
4 I am a subscriber of a number of journals. I don't
5 subscribe just for the purpose of paying the
6 first cost -- I am not thinking of the profit-and-loss
7 of the publisher. I am thinking that I like that journal
8 near my desk because I am a regular reader of that journal,
9 and I want to have the issues of that journal near at
10 hand.

11 On the other hand, if I am only an occasional reader
12 of the journal, then I am not a subscriber, and it would
13 be ridiculous -- it would be a waste of the nation's funds,
14 if I were to subscribe to a lot of things that I do not
15 read ^{regularly} / ; and the best way, not only for me personally,
16 but for anybody in the United States, would be
17 to use the cheapest possible way of getting
18 hold of that one article that one occasionally wants to
19 get; and that would be through photocopying.

20 COMMISSIONER. LACY: Nobody is suggesting that he ought to
21 subscribe to the whole journal in order to get the one
22 article, but the fact that he goes to the trouble of
23 ordering that one article suggests that, far from being
24 less useful to him than the subscription, serving less
25 of a purpose than the subscription is to the regular sub-

scriber -- he is particularly served by it. Why should the regular subscriber subsidize him by meeting the first cost?

DR. MACHLUP: I would not call it a subsidy, sir. The use of the word "subsidy" anticipates a conclusion from a particular theory; but the point is still this: This man who has a vague interest in one journal article -- in a particular journal article --

COMMISSIONER LACY: It is specific. It is not vague.

DR. MACHLUP: Sometimes a specific interest, but not always. I am a great copier myself for my own research. If the particular journal is not on the shelf of the library, I very often say, "The heck with it", and I do not read it, because it is not usually a "must read" article but only one that "maybe will be helpful in my research, I shall see later." But if it takes more time or more bother than it would to take it off the shelf and quickly get a photocopy, then I say, "The heck with it."

And that is the chief disadvantage of anything that could be put in my way as an obstacle to the reception and dissemination of knowledge.

COMMISSIONER LACY: Two other quick questions.

I am impressed by the fact that we assume that transfer payments that would involve royalty would be so small as to be of no real use to the publishers; but so large as to be a burden on the Federal government to

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 support the sources for scholarship in the country. But
2 passing on to another question:

3 DR. MACHLUP: May I interrupt, sir?

4 COMMISSIONER LACY: Yes.

5 DR. MACHLUP: I did not say, sir, that the
6 payments to the publishers would be small. I said the loss
7 that the publishers sustain from photocopying is small.

8 I did not say that what they might get,--if you
9 put on a tax on photocopying,--is small. The payment by the
10 photocopier is, of course, the receipt by the publisher. The receipt
11 would be almost as large as the payment that is made, though not quite so
12 large, because of the cost involved that might be deducted.
13 But I did not, I definitely did not, say that the ^{money} payments
14 would be large and the receipts would be small.

15 COMMISSIONER LACY: Well, if the payments were substan-
16 tial, it might make a considerable change in the economy.
17 It might permit the publisher of learned journals to
18 lower the subscription rates; to expand the number of
19 copies produced. And marginal journals, which do not
20 now find publication because they are not among those you
21 mentioned that survive, might survive if there were a
22 substantial flow of money.

23 DR. MACHLUP: That would presuppose that the
24 journal publishers are very bad businessmen.

25 COMMISSIONER LACY: Most of them are! Most of them are

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 learned societies and universities.

2 DR. MACHLUP: I agree. / ^{Still, your hypothesis} would presuppose that
3 the subscription rates of the journals are dependent on
4 other income received. Our economic models tell us
5 otherwise; namely, that these other payments received would
6 not be part of the marginal cost of producing the journal
7 and, hence, would not affect the profit-maximizing
8 subscription rate, or not even the subscription rates
9 that are ^{wrongly} considered optimal by the editors and publishers
10 of journals published by scientific organizations.

11 COMMISSIONER LACY: It might provide the margin of
12 survival for a marginal journal.

13 DR. MACHLUP This could be.

14 COMMISSIONER LACY: One other last point.

15 There are, of course, many kinds of serial
16 publications of which this image of the rarely photo-
17 copied scientific journal is not true. I am thinking, for
18 example, of newsletters which, typically, are very
19 expensive, which typically have a very small circulation
20 and, typically, are very cheap to reproduce, at a cost
21 of five percent, or two percent of the subscription cost.
22 There is considerable reason to believe that there is very
23 large duplication of those. I assume you would contemplate
24 some means of separating those, that do deserve some protection,
25 from those that do not.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 DR. MACHLUP: Frankly, sir, I am not sufficiently
2 informed about newsletters and periodical issues other
3 than scientific and scholarly and, therefore,
4 I had better not answer that question.

5 COMMISSIONER. LACY: Right!

6 JUDGE FULD: Any other question?

7 COMMISSIONER Wilcox?

8 COMMISSIONER WILCOX: I wonder if your research is showing
9 any differences, either in the practices or in the effect,
10 between the Scientific, Technical community and the
11 Social Science community and the Humanities?

12 DR. MACHLUP: I did not go into the photocopying
13 question in my research. I did research however, on
14 subscriptions, subscription rates and prices of journals, and
15 the size of the subscription.

16 The numbers are just coming out of the computer.
17 They will be processed on the day that they are compiled.
18 I can tell you something that came out
19 from the first printouts, namely, that the subscription rates
20 in the natural sciences and engineering technology are
21 much higher than the subscription rates in the social
22 sciences and in the humanities.

23 Secondly, the former rates not only are higher,
24 but they have been rising much faster during the last ten
25 years.

Thirdly, where subscription rates are different for individuals -- for example, the individual members of a society -- and for institutional subscribers such as corporations or libraries, -- the revenues from the latter have been increasing very, very much faster; indeed, the numbers of subscriptions from individuals have been falling, and in some instances falling at a larger percentage than the price increase; in other instances they have been falling at a smaller rate than that at which the price increased.

On the whole we find that societies that have different subscription rates now receive more and more of their total revenue from sales to nonindividuals, that is, to libraries and corporations. This is a rather gloomy picture; it is chiefly true for the natural sciences and the engineering fields.

JUDGE FULD: Mr. Dix?

COMMISSIONER DIX: Professor Machlup, you drew your examples of the ratio between copies made, and circulation of the journals from the most heavily copied journals.

We, here, I think, more often believe the damage may be done to the relatively marginal journals, with small circulations, and I wonder if you have extended this kind of analysis to those; and what the results might have been.

DR. MACHLUP: I have here in my notes only one, of the Journal of Biological Chemistry, with a

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 circulation of 7,200. But even there, the photocopying
2 in the United Kingdom amounted to a
3 little over one percent of circulation. Not having made any
4 study of photocopying myself, I am using here secondary in-
5 formation.

6 COMMISSIONER DIX: It is your impression -- as I believe
7 you said earlier -- that more or less across the spectrum,
8 there is not much evidence of damage.

9 DR. MACHLUP: This is my impression.

10 JUDGE FULD: Mr. Levine?

11 MR. LEVINE: Professor Machlup, if you could,
12 once again, give us the statistics on the Journal of
13 Biological Sciences. I thought you read them, and it was
14 more than ten percent.

15 DR. MACHLUP: You are right. You are absolutely
16 right. I made an error, and I apologize.

17 Maybe I did not have my glasses on, at that point.
18 It is ten percent. It may
19 make a difference if my notations here are correct.

20 I would have to go back to the original -- I got this from an
21 article by Maurice ^{Line} / in the Journal of Documentation, 1975,

22 "The Effects of Large Scale Photocopying
23 services on Journal sales." It is generally available.

24 since I don't have the article with me, but only this
25 notation, I cannot check my figures.
I beg your pardon for having misread my notes.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 JUDGE FULD: Are there any other questions?

2 (No response)

3 JUDGE FULD: Thank you very much, Professor.

4 DR. MACHLUP: Thank you, Judge Fuld.

5 JUDGE FULD: Professor William Baumol is our
6 next speaker. He holds appointments in the Economic
7 Departments in Princeton and New York Universities.
8 He is the author of numerous texts and articles on a
9 wide range of Economic topics. He has been directing
10 a major investigation into the Economic characteristics
11 of information focussing on Public Goods characteristics
12 and economy-of-scale factors which influence production,
13 dissemination, and use of scientific and technical informa-
14 tion.

15 Today, Professor Baumol will report on the
16 Economics of Property Rights as Applied to Computer
17 Software and Data Bases, which was sponsored by the
18 Commission.

19 Thank you for being here.

20 STATEMENT BY WILLIAM C. BAUMOL
21 PROFESSOR OF ECONOMICS
22 PRINCETON AND NEW YORK UNIVERSITIES

23 DR. BAUMOL: Thank you very much for having me.

24 I would like to say, first of all, that I have
25 brought along with me my colleague, Professor Yale
Braunstein, who will soon emerge -- as the knowledgeable

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 member of the group; and, after I complete my discussion,
2 if you have any questions, I would very much appreciate it
3 if my colleague could join me.

4 JUDGE FULD: We would be delighted.

5 DR. BAUMOL: I would like to say that, in
6 making my presentation this morning, I have little to add
7 to the masterly summary that has been prepared for your use
8 the CONTU staff. As a matter of fact, after a hiatus
9 of some weeks, I was, myself, forced to rely on the
10 staff's memorandum for reviewing what I had said.

11 But seriously, I assume that the merit -- such
12 as it may be -- of a direct appearance, as compared to the
13 rather weighty document -- weighty in size; I am not
14 suggesting that it is weighty in substance, but as a
15 substitute for that weighty document -- is the opportunity
16 to stress, not primarily our conclusions, but to stress the
17 logic of the Economist's approach to the issues that are
18 before you.

19 Therefore, I will summarize my conclusions
20 only briefly and, instead, try to emphasize the reasoning
21 behind them.

22 In addition, necessarily, when we have gotten
23 to matters of computational techniques, methods of solving
24 certain calculation problems, unavoidably, -- our discussion
25 being somewhat technical, -- I will try to indicate what the

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 purpose of those analyses is, and the general rationale
2 of their approach, but hope that where we have been unclear,
3 that you will prod us to try and go further in the direction
4 of being a bit more lucid.

5 Now, the first and basic conclusion of our
6 report--which I suppose will come as neither a great
7 surprise, nor as one of its major contributions -- nevertheless
8 is worth emphasizing; and that is the desirability of
9 copyright over the available alternatives.

10 That is not to say that copyright is without
11 shortcomings. Indeed, some of these are quite serious
12 and they will be dealt with later by me -- at least by
13 implication. But, basically, one must face up to the fact
14 that there are two alternatives:

15 First is the failure to do anything to protect
16 the interests of the producers of new knowledge--with the
17 resulting disincentive to invest in such new materials,
18 and a potentially enormous loss; and

19 The second alternative is the
20 adoption, by the producers, of new programs of
21 secrecy designed to prevent the proliferation of those
22 ideas before the investment in them can be recouped.

23 The merit of copyright lies not in itself,
24 but in the shortcomings of a process of secrecy. The process
25

1 of secrecy, when one thinks of it, has a number of short-
2 comings.

3 First: It reduces the availability of valuable
4 new materials. By its very process, secrecy is designed
5 to prevent others from using new ideas. In many cases,
6 it may be unenforcible, particularly in the case of final
7 products, which can be purchased, analyzed and, thereby,
8 reproduced.

9 It increases the difficulty, not only in
10 learning of the new materials but even in learning about
11 the existence and availability of the new ideas, thereby
12 reducing their use indirectly.

13 It often leads to wasteful duplication in
14 the process of creation of new ideas, each such producer
15 possibly being induced to work on his own little secret
16 materials.

17 Fourth: It leads to waste of resources,
18 designed to prevent leaks of new materials.

19 It may, for example, lead to the deliberate
20 and unnecessary injection of complexity in new ideas,
21 in order to increase the difficulty of discovery and
22 reproduction; and leads to waste of resources by rivals
23 who would have devoted those resources to the discovery
24 of secrets.

25 In short, one can say, to the critics of the

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 copyright approach, that the only thing worse than a
2 copyright system is failure to adopt the copyright system.

3 Having arrived at a disposition on the
4 desirability of the approach, per se, ^{next} is the issue of
5 what features it should adopt, and our report addresses
6 itself to two basic issues: the breadth of coverage;
7 and the length of protection.

8 The first of these issues is: Who should be
9 protected from what?

10 The second issue is the period for which the
11 protection should extend.

12 The first of these issues we approach, as it
13 were, from the flank, asking whether there are any uses
14 of copyrighted materials which should be excepted. In
15 a sense, here, I am dealing with issues very similar to those
16 to which Professor Machlup has just directed himself, and
17 I point out that within these general terms that I am
18 expressing -- not dealing with the issue of photocopying
19 in particular -- there are two grounds that can be raised
20 for exemption of particular users from copyright obliga-
21 tions.

22 One is the special merit of particular users,
23 or uses, of materials of copyright. We may say that
24 particular users should be exempted, either on distributive
25 grounds, because they are impecunious, or for other reasons

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 are unable to pay; or one can argue that they are parti-
2 cularly meritorious and deserving and that, therefore,
3 it is of Social interest that they should be exempted
4 from payment.

5 Then there is the second ground on which one
6 might argue for exemption from copyright protection, and
7 that is that one may argue that, in particular cases,
8 enforcement is simply impractical or uneconomic.

9 I am going to take -- and our report takes --
10 a very different position on these two cases. It does
11 favor exemptions in the latter case. The Economist's
12 view is that it is irrational to pursue benefits whose
13 magnitude is insufficient to make up for the requisite cost,
14 itself. In other words, it is merely arguing the standard
15 position in cost benefit analysis that it is irrational
16 to devote one million dollars in efforts to obtain
17 a benefit which is worth one thousand dollars.

18 This is not a mere sordid calculation in terms
19 of dollars and cents. It is not the Economist's unworthy
20 concern with pecuniary magnitudes. Rather, the issue is
21 that Social resources are wasted on such unjustifiable
22 undertakings, because those resources might otherwise have been
23 available for purposes that are vital to Society.

24 So that our view is that there are cases in
25 which it is appropriate to provide exemptions; first of

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 all, because the benefits are not worth the cost and,
2 furthermore, because the adoption of unenforcible rules
3 undermines enforcement of other and practicable rules,
4 as well.

5 Matters are quite different for exemptions
6 on grounds of alleged merit. Exemptions of groups of
7 users on the basis of need, Social contribution, etc.,
8 in our view, amount to a concealed sub-cross subsidy
9 by other users.

10 Economists question this on two grounds:

11 First, we believe that while subsidies are
12 sometimes justified, subsidies on grounds of need or
13 Social contribution should be paid for by the community
14 as a whole -- that is, out of public funds -- not by
15 other customers of some particular classes of product.

16 Second, we believe that any subsidy should
17 be granted explicitly and openly so that all can judge it
18 on its merits; and that subsidies which are granted in an
19 implicit and concealed manner are dangerous and questionable

20 Finally, we can argue -- and do argue -- on
21 somewhat more technical grounds that where it is necessary
22 to price in a way which more than covers marginal costs
23 -- that is, where it is necessary to cover initial costs,
24 as in the case of publications which are not reflected in
25 the low cost of additional copies of some published work --

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 that it is, in fact, sociably desirable that that burden
2 be shared as widely as possible; that, in fact, the
3 resulting distortion of allocation of resources will be
4 minimized if that burden is widely shared.

5 We therefore conclude that such exemptions as
6 there are should be limited to cases where enforcement is
7 impractical, and that exemptions to groups on the basis
8 of need or social contribution should, if possible, be
9 avoided.

10 Before turning to the issue of length of
11 copyright, I must say a word on the issue of trade-off
12 between breadth of protection and the length of the
13 copyright period, because this will help to explain the
14 logic of our analysis of length of copyright protection.

15 Both of these -- that is, the breadth of coverage
16 and the length of the copyright period -- are designed to
17 provide incentives for the investment of effort and
18 resources into the creation of new and copyrightable
19 materials.

20 Either an increase in the breadth of protection,
21 or an increase in the length of the copyright period, is
22 justifiable merely as an increase in the reward for this
23 sort of effort and, therefore, as something which increases
24 the incentive to do that sort of work.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Therefore, it follows that a decrease in one
2 of these -- that is a decrease, for example, in the
3 length of the copyright period -- can be compensated by
4 an increase in the other -- say, by an increase in the
5 breadth of protection -- with no necessary loss incentive.

6 Moreover, there are still other ways of compensa-
7 ting for a decrease in one of these.

8 For example, if one is permitted more sophisticated
9 pricing principles -- for example, if one encourages
10 price discrimination in the selling of copyrighted materials--
11 or other means which increase the revenues of the product --
12 it may be possible to decrease copyright period without
13 any net loss in incentives.

14 These preliminary remarks are important in
15 following the Economist's view of the optimal protection
16 period, because to the Economist, the copyright period is
17 an unfortunate but an unavoidable price, which Society
18 must pay in order to stimulate the flow of new and useful
19 materials.

20 For copyright amounts to the grant of a monopoly
21 to the creator of those materials for some specified period,
22 but the grant of a monopoly, obviously, has all of the un-
23 fortunate implications, with that form of market organiza-
24 tion, in terms of pricing and mis-allocation of resources.

25 It is not for nothing that social and economic

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 policy in the United States has, for many years, sought
2 to discourage monopoly and, of course, as in the case of
3 patents, the logic of copyright is the grant of a monopoly
4 for some specified period as a means to stimulate the creation
5 of new materials.

6 Now, several conclusions follow from this
7 observation.

8 The first is that if increased
9 breadth of protection, or encouragement of more sophisticated
10 pricing techniques, can substitute for great length of
11 copyright period, then that is sociably desirable.

12 Second: The implication of these observations is
13 that the optimal length of copyright involves the determina-
14 tion of the point at which the benefits of greater length,
15 in terms of stimulation of the creation of new materials, is
16 just balanced by the social cost incurred by further extension
17 of the period of monopoly.

18 All of this, of course, is part of the third
19 conclusion which follows from it: that increased length
20 of copyright period is not a virtue in itself; it is not
21 inherently desirable. That is to say: If the same results
22 can be achieved without it, that is something which should be
23 desired.

24 The fourth and final conclusion is that, at least in
25 theory, the optimal length of copyright period is unlikely
to be the same for all types of material.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 That is, for example, -- and I am not arguing this
2 as more than an example -- it may be desirable to have
3 a far shorter period of copyright for computer software than
4 it is for books and journals, because in each case, what
5 is involved is the balancing off of the benefits which one
6 gets by way of stimulation of creativity through a lengthen-
7 ing of the period, as against the social costs one gets by
8 the grant of monopoly for a more extended period.

9 Now, taking these considerations into account,
10 our report has provided a fairly simplistic computational
11 procedure which is designed to show what data are needed to
12 balance off the costs and benefits of extended length of
13 copyright protection, and to provide a rough calculation
14 of the optimal length of copyright.

15 Of course, as with all abstract and mechanical
16 calculations, the results are not intended -- nor should
17 they be taken -- as being a right, and definitive, simply
18 because they come by an obscure and incomprehensive process,
19 like the electronic computer. These are merely meant as
20 preliminary guides; as a device to help you in thinking about
21 the issue. But the important thing to recognize in thinking
22 about the issue, is not the numbers, or the formulae that emerge
23 from such a calculation, but that trade-off which I have been
24 emphasizing to you for the past few minutes: namely, the
25 fact that an increased length of copyright period is not a

1 virtue in itself. It has both benefits and costs, and
2 only by weighing the one against the other can one arrive
3 at a rational length of copyright in terms of the
4 interests of Society.

5 Our report contains many other materials
6 which inevitably must be omitted from a short summary
7 such as the one I have just presented. I can only say
8 that our work has convinced us of the importance, and
9 difficulty, and significance of the task of the Commission.
10 If our work has succeeded in contributing in some measure
11 to the completion of this task, it will have served its
12 purpose.

13 In any event, I must once again express
14 my gratitude to the / ^{Commission} for the opportunity to appear
15 before you today, and hope that in dealing with any
16 questions you may have, that some helpful materials will
17 emerge.

18 Thank you very much.

19 May I ask Professor Braunstein to join me?

20 JUDGE FULD: Yes. Mr. Cary?

21 COMMISSIONER CARY: I have two questions. The first one
22 relates to the problem of length of protection.

23 A Commission in Great Britain recently published
24 a summary of their views on the problems that we are dis-
25 cussing here. They took the view, as I recall it, that

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 term of protection -- actually, there was no reason for
2 changing the term of protection for software vis-a-vis
3 other works -- and they came to this conclusion: Namely
4 that even though I think they realized what you have said,
5 that many types of computer software are going to be of
6 short term duration. The fact that the law gives them
7 protection for a longer period really doesn't change
8 anything, as far as they are concerned, and I can see that
9 from a practical point of view for those writing the
10 Statute, it would be much simpler if all would specify
11 the same term.

12 What comment do you have on that?

13 PROFESSOR BAUMOL: I have two comments to make.

14 The first is: Clearly, there is always the matter
15 of a rational compromise. One can go to either extreme.
16 That is, to insist that one must avoid complexity at all
17 costs and, therefore, have absolutely no flexibility in
18 term.

19 Or the other is to say: Because the theory says
20 that each copyrighted item has its own optimal length
21 of copyright protection, one should lose one's self in
22 an enormous and unmanageable number of copyright periods.

23 Frank Wright once characterized that approach
24 as "irrational passion for dispassionate rationality!"
25

(Laughter)

The fact is that, of course, there are reasonable compromises; and all I suggest is that this group should consider the possibility of two or three copyright periods; not an infinite number, nor simply take for granted that one must be the right number because it happens to be the smallest number.

The second issue -- I have not read the British report to which you refer, but I think that the conclusion, nevertheless, is untenable because, remember, if you think of what the purpose of copyright is, it is to get new ideas going; to reward the person who produced the new ideas -- the group who produced the new ideas; ^{to provide} an inducement to increase that flow and, then, to provide the flow of benefits from those new ideas to Society, as a whole, as abundantly and as freely as possible.

Notice what happens with the termination of the copyright period. The period of the copyright marks the borderline between the time when the bulk of the benefits flows to the creator of the idea, and the period when the bulk of the benefits flows freely to the rest of the community. If the typical length of usefulness of software is, say, three years, or five years, and the copyright period is twenty years, or fifty years, it means that, in effect, typically, the period when the ideas will flow freely to

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 the community as a whole, will never occur.

2 COMMISSIONER CARY: If the computer program the soft-
3 ware really is of no value, say, after five years, does it
4 make any real economic difference?

5 PROFESSOR BAUMOL: No! But what that augurs is
6 that the copyright period should be less than five years,
7 so that there is a sharing of benefits between the creator
8 and the rest of the community.

9 The reason the community grants a monopoly to
10 the creator is not because it loves monopoly, or because
11 it loves the creator, but because that is a way to increase
12 the benefits that flow to the community. And, therefore, it
13 makes no sense if one grants what is, in effect, for all
14 practical purposes, a permanent monopoly to that creator
15 -- that is, a monopoly for the useful lifetime of that
16 product -- so that from its birth to its death, it is
17 offered only on monopoly terms.

18 COMMISSIONER CARY: Thank you very much.

19 The second question I have relates -- well, it
20 may be sort of a tangential issue -- but it does relate,
21 in a way, to the problem of trade secrecy, which you develop
22 in your report; namely -- and I must confess that I did
23 not read the original draft of your report --

24 PROFESSOR BAUMOL: That is understandable!
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER CARY: I got a little puzzled there; on some
2 of the terminology. But, assuming that you have copyright
3 in software, do you think it is economically desirable,
4 or feasible, or necessary, to require -- as is done in
5 most other cases where the person desires the protection --
6 the deposit of actual copies of this with the Copyright
7 Office, for example. You came up with a lot of arguments
8 as to why it is difficult to do so. It is expensive to do
9 so, and so forth.

10 Do you find any connection there between the
11 disclosure problem which you just had in the Trade Secrets
12 area, as requiring the deposit or not.

13 Could you comment on that?

14 DR. BRAUNSTEIN:: I will take that one since I
15 wrote part of that section.

16 For the record, I am Yale Braunstein also of
17 New York University. Let me answer. I think that, since
18 one of the purposes of copyright -- one of the benefits of
19 copyrights over trade secrecy -- is that we saw it can prevent
20 wasteful duplication. I think it would be, if not mandatory,
21 advisable to have on the deposit, at least a description
22 of the software as to what its purposes are; maybe what
23 its data requirements are, or what-have you, in the exact
24 language of it, whether it be readable, or in machine readable
25 form; or whatever.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 I think that need not be as strict as the
2 deposit requirements for other materials.

3 I think, in this field, that if at least summaries,
4 or brief descriptions of the programs, were deposited; if the
5 Copyright Office, itself, did not distribute that widely,
6 I think you would find even that firms would begin the
7 business of making those descriptions available by fee,
8 or whatever, to people who are interested, and I think
9 there would be a definite economic benefit from that type
10 of dissemination of information about the software, itself

11 COMMISSIONER CARY: Proceeding from there to another aspect
12 of the same question, if you have -- well, take data bases,
13 for example -- which are updated hourly, daily, or what-
14 have-you, depending on the nature of the group that
15 is issuing that, how would you, just as a technical matter,
16 go about updating this description with the Copyright
17 Office?

18 Do you send something every day; every week;
19 every month; or yearly?

20 DR. BRAUNSTEIN: I will have to draw on my
21 knowledge of Economic data bases, which are the ones I use
22 widely. From the user's point of view here, it is not
23 so often what the update is that is important, as knowing
24 when updates occur and with what frequency they occur.
25 So if the Census Bureau's information of population in

1104 CARY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Metropolitan areas is updated every ten years, with
2 accurate data; and every five years with estimates, the
3 statement saying that it is updated in ten-year intervals
4 with accurate Census data ^{and} /in five year intervals with
5 survey information, will tell me almost as much as I
6 would want to know, short of the exact number that I would
7 be looking for. So the deposit requirements in that area
8 should be a description of the frequency of the updating;
9 the type of material that is updated; and, possibly,
10 the source of material being updated -- enough so that
11 the researcher in the field can make an intelligent decision
12 as to whether that data base is going to meet his needs,
13 or not.

14 COMMISSIONER CARY: Thank you very much.

15 COMMISSIONER HERSEY: Dr. Baumol, in the summary in the
16 beginning of your statement, you define "major issues";
17 and the more specific issue, you say, is whether computer
18 software should be copyrightable and, if so, what the
19 terms of the copyright should be.

20 Is my impression incorrect, that you have not
21 really confronted the issue, whether software should be
22 copyrightable, but have assumed copyrightability and
23 proceeded, then, to compare the benefits of copyright
24 against the alternatives?
25

1 DR. BAUMOL: I am not quite sure that I understand
2 the terms of your question. I think the argument that
3 I have just given you in my presentation was meant to
4 cover computer software, as well as the printed page, to
5 argue in favor of copyright.

6 COMMISSIONER HERSEY: In favor of copyright, as opposed to
7 -- but you have assumed copyrightability, have you not?

8 DR. BAUMOL: Meaning?

9 COMMISSIONER HERSEY: Meaning the use of copyright to
10 protect software would accord with the basic philosophy
11 and purposes of copyright.

12 DR. BAUMOL: I think that I went through the
13 reasons that we reached that conclusion. When you say
14 "copyrightability", I am not quite sure whether you mean
15 there is a constitutional base --

16 JUDGE FULD: Whether it is desirable.

17 DR. BAUMOL: I certainly address the issue
18 whether it is desirable.

19 COMMISSIONER HERSEY: That is the distinction I was
20 making.

21 DR. BAUMOL: Yes.

22 What I have argued is that, in principle, it is
23 desirable because it can serve as a stimulus to the creation
24 of work in this area, and that, in fact, as compared to
25 the use of secrecy, it has significant advantages.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Now, of course, it may be that empirical informa-
2 tion may turn out to show that the stimulation which a
3 copyright system provides for creativity in the area
4 is minimal. If that, in fact, were to turn out to be
5 the case, of course, it would not meet the cost-benefit
6 test. As far as I know, there has not been any study
7 that suggests or that reflects that there is very large
8 stimulation to be derived from it.

9 JUDGE FULD: Are you finished, John?

10 COMMISSIONER HERSEY: Yes.

11 COMMISSIONER LACY: Professor Baumol, let me say that
12 I have frequently used your writings in the past, and found
13 them always to be very illuminating, and very helpful.

14 DR. BAUMOL: Thank you very much.

15 COMMISSIONER LACY: There are a couple of questions that
16 I would like to raise.

17 One is in connection with the use of the word
18 "monopoly", frequently throughout the study.

19 I have seen many other writings on the subject,
20 and I think it would be worth taking a few minutes to
21 clarify the meaning in this context. It is a perjorative
22 word, of course --

23 DR. BAUMOL: No. I am not treating it like that.

24 COMMISSIONER LACY: I am not suggesting that you do.

25 I am talking about the common use of such a

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 perjorative word.

2 Also, I think, one could be led into, even, mistakes
3 in economic analyses, - as that is used in this context.

4 We should recognize that monopoly given to an
5 author by copyright is only monopoly over his own work --
6 the sort of monopoly a peach farmer has over the peaches
7 that grow on his farm; or that a carpenter has over his
8 carpentry; or that a consultant has on his consultation.

9 He has to sell the product of his work and,
10 frequently, have acute competition with a great many other
11 people who are in the same market. Mr. Hersey writes a
12 novel and, by copyright, is given monopoly over that novel.
13 It is offered for sale in competition with, let's say,
14 3,000 other novels and perhaps 100,000 other novels in
15 print, plus thousands of other opportunities for equivalent
16 kinds of satisfaction.

17 A wheat farmer, where he has monopoly over his
18 wheat, takes it to the market and sells in competition with
19 all the other wheat farmers. There is a difference to
20 the extent that there is more/between the quality of
21 Mr. Hersey's novel, and the quality of, let's say,
22 Jacqueline Suzanne's novel, than there is between the
23 wheat of one farmer and another.

24 Nonetheless, essentially, you have a monopolistic
25 entry over one person's product in a very competitive
market.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Now, this affects prices.

2 You suggest, in one place, that a monopolist has
3 no incentive to point towards the incremental cost; but
4 a publisher marketing the product is, of course, under
5 great pressure -- because of price competition in the
6 industry -- to price as closely as he can and to cut the
7 incremental cost.

8 As a matter of fact, he has already sunk his
9 first cost before the book goes on the market. His
10 marketing strategy in the pricing level is to give the
11 maximum increment over incremental cost without regard
12 to its first cost.

13 This is true throughout the Copyright area.

14
15 There are a dozen competing text books that
16 are offered for high school courses, that take the pressures
17 off of correspondence courses, and this is coming to be
18 true in the computer software field, as well. Numerous
19 computing programs offer to handle the Accounts Receivable,
20 or similar common functions.

21 So that I think when one uses the word "monopoly"
22 one should use it with great care to avoid the suggestion
23 that there is any control of the marketplace except
24 for that one product, itself, which is normal in a highly
25 competitive situation.

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224-

That is true of all copyright/^{ed}material.

If it is ten years old, or two years old, I see very little logical difference in the rewards that Society is willing to pay, but it is likely to be less after 20 years, than it is after two years. We have no reason to believe that this is inhibiting the use of the work. By and large, copyrighted work circulates much more freely than non-copyrighted work, before there is more incentive, it seems, to have it on the market.

It seems to me that the question of convenience might weigh more heavily on this rather tenuous argument about balancing benefits.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 One other question: Have you taken into account
2 that, under the Universal Copyright Convention, we are
3 obligated to the terms of at least 25 years of copyright
4 protection.

5 DR. BAUMOL: It is a quaint custom, which says
6 that, at a certain point, one asks questions -- when
7 statements are more appropriate.

8 If I may just go over a few brief comments on
9 your statement.

10 First: I agree that, generally, there is no
11 absolute monopoly involved in the grant of the copyright,
12 nor is monopoly necessarily an undesirable thing. In
13 fact, the term "natural monopoly" is a term which has
14 been invented to show -- with all its
15 shortcomings -- it might be better than the available
16 substitutes, in certain circumstances.

17 Nevertheless, the grant of a copyright -- like
18 the grant of a patent -- is designed to offer the creator,
19 or the possessor of a particular piece of property, as much
20 monopoly power as is possible under the circumstances.

21 In some cases, the monopoly power that is
22 granted is very small, because the available substitutes
23 are very close.

24 In other cases, it may be enormous. It may vary
25 from case to case.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 It is, of course, where the monopoly power
2 happens to be large--or one has a unique and highly
3 valuable idea for which there are no close substitutes--
4 that this becomes an important issue. And these are the one
5 over which the entire discussion
6 must focus.

7 Now, given those ideas, you see, it is true
8 that if one were to argue that the software copyright
9 period should be five years because no software package
10 has a useful life of more than four years, I would say that
11 is nonsense. Then you may as well have a copyright that
12 lasts forever, since five years, or six years, or seven
13 years, or twenty-five years, would have exactly the same
14 economic effect.

15 The heterodox position which we are taking
16 -- and it should be emphasized that this follows from
17 the logic of our analysis -- is that if the useful life
18 of a piece of software is normally four years, then the
19 optimal copyright period might be three years, or two
20 years; not as a matter of justice; not as a matter
21 of fairness or equity; but as a matter of getting the
22 maximal flow of benefits to the community as a whole.

23 Remember, here I am taking the view that
24 most economists will take: that the justification for
25

1 copyright is the stimulation of new ideas for the benefit
2 of the community as a whole, and that the notion of
3 copyright or patent is, as it were, to provide a preliminar
4 period during which the bulk of the benefits flow to the
5 creator of the idea; and the subsequent period, during which
6 the benefits flow to the rest of the community.

7 Where that optimal period occurs, it is not clear.
8 But it is somewhere in between zero at the one extreme,
9 and the period beyond which the product is useless at the
10 other.

11 Now, I recognize that one has to deal with Treaty
12 constraints, legal constraints, and others, and clearly,
13 whatever action is taken must not violate whatever such
14 constraints have been pre-imposed upon the decisions that
15 are made. I recognize that; and I can only argue that one
16 approaches as closely as one can to such ideals as one can
17 formulate within the limits of what is permissible by
18 such commitments.

19 MR. LEVINE: One comment on the last point,
20 Professor Baumol;

21 Your suggestion that the term should be shorter
22 in order to enable the ideas to flow freely while they have
23 a useful life and then, you suggested patents and copyright
24 in the same sentence.

25 The distinction between patents and copyright
is precisely that the idea is not protected, but only

1 the expression of the idea is protected. So that when a
2 novel is written, anyone is free to use that idea, although
3 no one is free to use the particular way the idea happens
4 to be expressed. Patent is different. Patent protects
5 more than merely the expression of the idea and, in effect,
6 protects the idea as well; and the trade-off has been for
7 a much shorter term of protection for patents than for
8 copyrights.

9 I wondered whether you considered that in your
10 analysis?

11 DR. BAUMOL: Well, we certainly have considered it;
12 and I agree that there is some degree of difference between
13 the two. I was not trying to imply that they were equivalent,
14 though my expression might have suggested that -- and probably
15 did. But I was arguing that, in this one feature, there was
16 a common element in the analysis. You see, the question
17 in both cases is: What is the optimal length of life?

18 Now, one can get it from a table of random numbers.

19 One can look for some declaration by the data
20 transmitted by some obscure means; or one can argue -- as
21 "dismal" scientists do -- and say, "Look, where do the
22 trade-off costs and benefits go in the wrong direction?"

23 All I have done is to see where the dismal
24 scientist's preconceptions lead us to, and have, therefore,
25 said: "What are the costs, themselves? What are the

1 benefits, and where does one judge when the trade-off
2 stops being favorable to Society and starts becoming
3 unfavorable." In that respect, one must regard the two
4 approaches -- the two institutions: Patent and Copyright
5 -- as having a feature in common.

6 It clearly follows, from exactly the feature
7 that I have cited, that it may be desirable to have a
8 term of
9 different/life for one, than for the other; but the logic
10 should be the same.

11 That is the point I am making.

12 JUDGE FULD: Rhoda?

13 COMMISSIONER KARPATKIN: Judge Fuld, we received in the
14 mail a preliminary draft of "Computer Software Protection
15 Statute." I think it was at the request of Mr. Hersey.

16 I would be very interested in having a member
17 of the Staff summarize that for Professor Balmol, and
18 hearing his reaction to it; as to how it fits into his
19 analysis.

20 JUDGE FULD: Does any member of the Staff
21 volunteer?

22 MR. SQUIRES: My name is Jeffrey Squires. And
23 I have been designated as that member of the Staff to
24 summarize something which I haven't taken a look at, in
25 months, I suppose.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 First of all, in concept or in outline, the
2 suggested Statute is similar to the Copyright law that
3 we now have. It provides protection against the creator
4 or the proprietor not being able to control the duplication
5 of the work -- the software.

6 However, it differs, in at least the important
7 concept, that the idea as well as the expression -- if
8 you use those two concepts as a dichotomy -- are protected
9 under this Statute and, once one has created and jumped
10 through the proper hoops
11 to register and deposit a copy, similar to what is the
12 case under Copyright, you can control the dissemination
13 of the product for a certain specified period of time --
14 and I think it was just a suggestion -- for a term of
15 ten years. Ten, twelve years -- I cannot remember, exactly.

16 But the Important distinction, if I recall cor-
17 rectly, is that both the idea as well as the expression
18 are protected in that, in that sense, it is a hybrid of
19 the Copyright/Patent protection.

20 MR. LEVINE: I guess I might clarify what
21 that draft Statute was: It was prepared at the suggestion
22 of Mr. Hersey as part of his additional, or dissenting
23 views on the Software Committee Report of CONTU, and
24 was prepared with Staff assistance. But it is not the
25 CONTU committee report.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 JUDGE FULD: Are you in a position to answer
2 that; or address yourself to it?

3 DR. BAUMOL: I would be happy to, but I think
4 Professor Braunstein has something he wants to say.

5 DR. BRAUNSTEIN: I am intrigued because I am
6 worried about what the "novelty" requirement is, for the idea to
7 be protected.

8 MR. SQUIRES: Another dichotomy that is
9 manifested in the difference between Patent and Copyright
10 is: originality as opposed to novelty -- whatever they mean
11 -- and I am not sure. But in this draft Statute the
12 concept of originality, rather than novelty, was employed.
13

14 It means, in effect, that if I create a piece
15 of computer software that is exactly duplicative of some-
16 thing that you have created, but I had no access to yours
17 and I created mine out of whole cloth, I deserve protection
18 and I can get protection under that Statute, whatever
19 that protection is worth; and it may be worth very little.
20

21 DR. BRAUNSTEIN: I am worried about that whole
22 notion of using copyright, or something else, to protect
23 computer software and the ideas embodied in that software,
24 where, in many cases, that may be appropriate. But there are
25 also many cases where the ideas behind the software have

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 originally been expressed in non-computer related works --
2 whether it be a statistical package, or an airline reserva-
3 tions package of software, or whatever. And I am
4 worried about the protection extending to other people,
5 who would then try to develop software for their computer
6 systems to do those tasks, also.-- whether they would be
7 prohibited, or have to pay royalties, or whatever to
8 the person/^{who}has this copyright, or whatever it would be
9 called.

10 DR. BAUMOL: If I may generalize: My reaction
11 is, in a sense, a logical extension of some of the things
12 that were said before.

13 The first is that, if there were some way of
14 defining and testing the novelty/originality, etc., then
15 principle-broadening of what it is that is covered by
16 copyright is, in general, desirable.

17 The danger is, of course, that one will run into
18 tremendous problems in carrying out such a proviso, and
19 that it would become so complicated as to be destructive!
20 I am not arguing that it will be. I am arguing that it is
21 something which must be thought through carefully -- the
22 scenarios played through in advance with exquisite care
23 before one commits himself to something that may backfire
24 and prove extremely costly.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 My other comment is that I would urge that if the
2 ten-year protection period -- which is suggested in this
3 draft Statute -- is a number that is picked out of the
4 air -- and I don't know that to be the case -- I am
5 not suggesting that it is --

6 MR. SQUIRES: It is!

7 DR. BAUMOL: It is worth careful consideration,
8 along the lines we have been arguing, before one commits
9 one's self to an arbitrary period of time and, once
10 again, consider the possibility of, perhaps, two or three
11 protection periods--depending on the materials covered.

12 COMMISSIONER HERSEY: It was picked out of the air; and in
13 one of the comments that I provided with this, there
14 was the suggestion that the period of protection might
15 be adjusted to precisely balance out the desirability
16 of the stimulation of new ideas and their circulation, and
17 protection.

18 The cogency of your argument on "term", seems
19 to me to be one of the things that may support dealing
20 with this issue outside of copyright, rather than within
21 copyright; that if you are bound by the term of the
22 Copyright Statute of life plus 50 years, or 75 years,
23 or by International Agreements to 25 years, or whatever
24 it might be, there is no chance for this kind of flexibility,
25 and that seems to me to be one more argument to try and deal

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 with this, outside of copyright.

2 DR. BAUMOL: That may well be. It may be that
3 the constraints are so serious that you are forced to
4 adopt a solution which might otherwise
5 have been second best.

6 COMMISSIONER HERSEY: I should explain to you that my
7 basic argument--of keeping programs outside of copyright--
8 has to do with the nature of the Object Program which
9 is, in effect, a mechanical device, after it has been
10 transformed from source to object code. And my question
11 is whether it is appropriate for copyright protection
12 to protect something that is, essentially, a mechanical
13 device.

14 DR. BAUMOL: I am not sure whether it is
15 that which, to me, would be the crucial issue. The crucial
16 issue is always in terms of effect, not the description
17 of the object protected and, for example, your point about
18 the constraints, to me, is a very important one, and some-
19 thing to which I would give a great deal more weight, I
20 think, than I would to the description of the object as
21 mechanical, or not.

22 COMMISSIONER HERSEY: Then the issue of effect might
23 be the effect on other forms of copyright--if this protection
24 were afforded to what is, essentially, a mechanical device.
25

1 DR. BAUMOL: Yes. That, I agree, is very
2 important.

3 MR. FRASE: Mr. Baumol, during the time that
4 your colleagues did this study for the Commission on the
5 Computer issues, I know that you have been involved in
6 other studies of publishing.

7 Would you have any comments to make on your
8 views on the photocopy issue; and whether you agree
9 with Professor Machlup?

10 DR. BAUMOL: I have reservations about an attempt
11 to enforce payment on photocopying of copyrighted materials
12 simply because I suspect that, despite all the techniques
13 I have heard of, that:

14 No. 1: The cost is likely to exceed the
15 benefits, and

16 No. 2: There are likely to be serious enforce-
17 ment problems which can cause a breakdown in the system.

18 So that my argument is not like Professor
19 Machlup's, in opposition, in principle, except the
20 principle against undertaking programs whose social
21 benefits are outweighed by their social costs.

22 Now, these are factual questions.

23 It may be that there is a device, a surveillance
24 device, which will not only immediately identify an act
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

FORM 101 (201) 347-0224

1 of photocopying a piece of copyrighted material but will
2 immediately identify the name, rank, and serial number of
3 the culprit. Maybe so. And maybe it can do so at
4 minimal cost. In that case, I might, very well, revise
5 my views. At the moment, I am skeptical.

6 MR. FRASE: Suppose that there were minimal
7 costs, and there were not these problems of enforcement.
8 Would you say what your economic theory would be as
9 to why you might, then, support such an arrangement?

10 DR. BAUMOL: Well, the answer -- once again,
11 forgive me for quoting myself. One likes to defend one's
12 consistency.

13 I argued that economic analysis shows
14 that when there is a difference between total cost
15 incurred in some process -- such as publication -- and the
16 sum of the payments that can be received if one charges
17 merely marginal or incremental cost, and those payments
18 are not to be made -- that is, the difference is not to
19 be made up by public subsidy -- then the payments are
20 best made up by as large a class of users as possible;
21 not merely because there is "fairness in spreading the
22 load", but because you can show, analytically, that
23 in that way, you get minimal misallocation of resources.

24 So my answer is, in principle, "Yes". The
25 users of photocopies of copyrighted material should^{pay}, in

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224
ALL REPRODUCTION RIGHTS
RESERVED

1 fact, -- I don't say their share, because I don't know
2 what their share of the cost is -- bear an appropriate
3 share of the cost, if the cost, itself, of collection does
4 not exceed the benefits; if the trouble of collection does
5 not exceed what is obtained from it, and if the problems
6 of compliance are not so serious as to undermine much
7 more than one gains in the process.

8 COMMISSIONER CARY: One additional question which relates
9 to that problem:

10 Would you, then, go on to say that you would favor
11 the concept which you have alluded to earlier; that economists
12 in general would be inclined to favor "no exemption", in this
13 type of a situation?

14 DR. BAUMOL: That is right! That is, I think,
15 economists in general -- clearly, one cannot speak for
16 an entire profession -- but I must say that, somehow,
17 economists have managed to be much less different in
18 their views than any other discipline that I know of, and,
19 at the same time, have achieved the reputation of
20 absolute disagreement on everything!

21
22 But be that as it may, I think I do speak for
23 the bulk of the profession when I say that we are not
24 against subsidy. We believe that it is a good thing
25 to provide housing to the poor, and research grants to

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 un-tenured faculty members. But those research grants
2 should not come out of publishers--just as the Arts should
3 not be subsidized by the artists.

4 If we believe in subsidizing the Arts, it should
5 be done openly, and it should be done by the general
6 Treasury -- not by particular classes of individuals.

7 MR. KEPLINGER: Professor Baumol, we have heard
8 at length, in previous meetings from technologists, that
9 their predictions were that technology may lead the
10 future world in the production and dissemination of
11 information.

12 I believe I have heard you speak, before, of
13 what you think some of the economic forces are that may
14 change the way information is disseminated in the future--
15 which you think may have some relevance in this Commission,
16 in its thinking about how the law might apply to, essential
17 copyright such as data bases and computer software.

18 Could you spend a few minutes and share some
19 of those ideas with us?

20 DR. BAUMOL: Certainly! Let me say that I
21 deplore people who forecast the future. So you have invited
22 me to violate all of my preconceptions on this issue. But
23 this is one case where I think -- what is the cliché --
24 events cast their shadows before them?
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

347.0224

with
In a study/which I was involved several years ago and had the good fortune to work with my old friend, D.R. Dix, before; we examined the costs of Library operations, and -- along exactly the same lines -- I examined something about cost of publications, etc.; and one of the things that emerged from the empirical data was that, in fact, these costs are remarkably different from the behavior of costs in the economy as a whole; namely, that costs per unit of library operations over a very long period, for which we have data, rise cumulatively and consistently, far faster than costs in the economy as a whole. As I remember it, costs -- whether taken per volume or per student -- over the period when the rate of inflation in the economy -- some of us still remember this -- was something like 1-1/2% per year, these costs of library operations were rising, roughly, 6 to 7 percent a year, compounded and cumulative.

Now, that doesn't sound like much. I can assure you that anyone who has lived with compounding should consider these as frightening a set of figures as they have ever encountered. Just to give you an illustration, the greatest inflation in English economic history before the Twentieth Century was the great Tudor inflation which began one year after the accession of Henry VIII and, indeed, ended with Cromwell's takeover

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 of the reigns of government. In that 120-year period,
2 prices octupled.

3 Now, the rate of inflation that was involved
4 was approximately 1.3% a year, compounded. Yet, here, we
5 are talking about something between 6 and 7 percent a year,
6 compounded; roughly a doubling every ten years, a quadrupling
7 every twenty years and so on and so forth, a geometric
8 progression--in the words of Mr. Malthus.

9 First, let me ask: Is this a fortuitous phenomenon

10 Is this something which occurs because librarians
11 are either villainous, or peculiarly inefficient?

12 The answer is, clearly, "No".

13 It is a phenomenon which one finds in virtually
14 all human activities in which labor is an essential
15 element in the quality of the product. One finds this
16 in other activities, such as universities, as a whole.
17 One finds it in the Performing Arts. One finds it,
18 incidentally, in profitable, or allegedly profitable
19 operations, such as automotive insurance, where what is
20 being sold is medical service, legal service, and repair
21 where,
22 service, and, therefore, human activity is, once again,
23 an essence of the end product.

24 Because, in these products, there is no room
25 for increased productivity of the sort one finds in manu-
facturing. There is no offset to rising wages; to rising

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 library costs, and the result is that costs rise--
2 cumulatively and constantly--in just the manner that is
3 observed.

4 Now, what does all this have to do with the
5 question I was asked?

6 The answer is that what this means is that
7 certain types of activity in publication, in libraries,
8 and elsewhere, is going to grow as it has been growing,
9 cumulatively, more expensive,--not in terms of inflated
10 dollars,--not as the economy as a whole inflates,--but
11 far faster than is happening and has happened in the
12 economy as a whole.

13 It is going to mean that there is increasing
14 pressure for finding substitutes for the procedures which
15 have traditionally been employed in the dissemination of
16 knowledge. And there are means at hand, because -- for
17 precisely analagous reasons -- one finds the opposite
18 trends in the use of electronic devices, for the accumula-
19 tion, storage, and dissemination of knowledge.

20 One can now get, for fractions of a dollar,
21 electronic storage devices which only a decade ago cost
22 millions. This is literally true. And there is no
23 reason to suspect that the end to that trend is in sight.

24 What this means is that we are going to be faced
25 with increasing pressure to look for and adopt substitutes--

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 substitutes which we may not like; and substitutes which we
2 may not be fully happy with--but electronic substitutes
3 for things which were previously provided by storage, and
4 library stacks, and by reproduction through printing
5 devices.

6 What it means is that electronic means for the
7 storage and dissemination of knowledge -- which, today, are
8 not adopted because they are more costly than we are
9 sometimes led to believe -- will become less costly
10 in the decades ahead, while the cost of the traditional
11 methods of dissemination of knowledge will grow more and
12 more difficult to finance.

13 We already see these pressures. These pressures
14 grow stronger, and I think there is every reason -- both in
15 logic, in analysis, and in empirical data--to expect that
16 they will grow stronger still. I think that, unless there
17 is a major breakthrough, there will be means of dissemination
18 and storage of knowledge adopted--in two decades--which
19 strike us as Science Fiction today, and they will be
20 adopted not because they will be fun--or because they will
21 be lovable--but because the economics will force us in
22 that direction. I make this statement not because these
23 are things which remain to be invented--but because these
24 are devices; these are pieces of equipment, which are
25 already in existence and which are kept from use only by

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 unfamiliarity, and by the fact that, for the moment, they
2 are still more costly than the traditional approaches,
3 But the distance in cost, in separating these and
4 the traditional methods, grow narrower every day; and the
5 crossover points are upon us.

6 JUDGE FULD: Thank you very much, Professor
7 Baumol.

8 COMMISSIONER HERSEY: I had one question.

9 This was a very eloquent statement; and I hate
10 to turn to earthly things.

11 DR. BAUMOL: It's better that way.

12 COMMISSIONER HERSEY: You have spoken in your presentation
13 about possible exemption because of the impracticality
14 of enforcement. I wondered whether you had any specific
15 cases, examples, types of situations in mind, in
16 speaking about the possibility.

17 DR. BAUMOL: Certainly I was thinking, of course,
18 of photocopy^{ing}, and I am not arguing that all photocopying
19 should necessarily be exempted.

20 I am saying that, certainly, there are many
21 categories of photocopying -- the occasional photocopied
22 item, etc. -- and I would think, at least for the
23 moment, that enforcement is both excessively costly and
24 even if the costs were devoted to it, would still be ---
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER HERSEY (Interposing) I understood you to
2 be speaking of the act of enforcement with respect to
3 computer software in your paper, as a whole.

4 DR. BAUMOL: Once again, I would have to examine
5 the fact that computer software would be very hard to
6 defend as something which should be exempted on these
7 grounds. One might argue there are certain types of
8 computer software where usage would probably be de minimus;
9 and there may be easy device systems to distinguish
10 that sort, from the other sort. You may want to examine
11 that. That is; that the record-keeping becomes more
12 expensive than it is worth. One might, for example, ask
13 the author of computer software who saw that it was likely
14 to earn \$50.00 per year -- as we do on some of our
15 scholarly publications -- and ^{felt} that the record keeping was
16 not worth it, -- to simply designate that particular piece
17 as exemptible. One can think of other ways of going
18 about it.

19 But, in general, I was not thinking of computer
20 software, personally.

21 COMMISSIONER PERLE: I am profoundly upset at some of the
22 things that led you to the conclusion that you reached.
23 Given a structure which provides for single term copyright,
24 in years, for all methods of expression of ideas with
25 which we have been able to live, is this something unique?

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Is there something special about computer soft-
2 ware that differentiates from all other types of materials
3 that are granted copyright protection?

4 DR. BAUMOL: First of all, just because something
5 has existed for many years does not, per se, render it
6 desirable. Tradition is, often, a very poor guide
7 for the future,--except that it may teach us not to repeat
8 it.

9 I am not arguing that a long period of protection
10 is always undesirable,--although I am very suspicious of
11 it. But the fact is that we have lived
12 with all sorts of excessive pollution; we have lived
13 with crowded cities; we have lived with many sorts of
14 things which I am sure you would join me in being very
15 happy to change, permanently.

16 COMMISSIONER PERLE: Granted!

17 DR. BAUMOL: What is very special about
18 computer software, presumably, is the short period of useful
19 life of the product. if the logic
20 of our analysis stands up, then that should call for
21 a corresponding period of copyright protection, ideally,
22 permanently.

23 COMMISSIONER PERLE: The logic of that leads one to the
24 conclusion that there would have to be a whole series of
25 terms of copyright protection, of every sort.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 DR. BAUMOL: No, sir. No, sir. There is a rule-
2 of-reason which says that just because two is better than
3 one, five million is not necessarily better than two.

4 You know, there is a rule of reason which says
5 that there are diminishing returns to increasing fineness
6 of calculation.

7 Of course, if it costs nothing to provide
8 additional distinguishing periods, so that we could,
9 without effort, without cost, without difficulty, add
10 to the number of sub-categories -- each of which had
11 its own period of protection -- obviously, one has
12 assumed--by that assumption--the conclusion that an
13 infinite number of periods of protection is operable. But
14 you and I know better than that. We know, in fact, that
15 increasing numbers of categories mean increasing costs;
16 increasing difficulties of enforcement; increasing
17 complexity. And I have not pre-judged that more than
18 one period is optimal. I am arguing, though, that one
19 should not pre-judge that one period is optimal.

20 COMMISSIONER PERLE: Okay. Then you are not really saying
21 if
22 that/this Commission should recommend a period of protection,
23 that it is, necessarily, one which will be different.

24 DR. BAUMOL: That is right! But what I am
25 arguing against is what we have just seen illustrated --
excuse me for picking on you, in a friendly way -- an
arbitrary choice of, say, ten years.

1 It is just as arbitrary to pick the period
2 given to us by tradition, as it is to pick a 10-year
3 number because ten happens to be nice.

4 All I ask of this Commission is that it weigh
5 the possibility of two or three or, maybe, five, or maybe
6 one copyright period; comparing the cost and benefits, and
7 not saying "one has always worked, therefore we will not
8 consider it any more."

9 COMMISSIONER DIX: May I follow that up just a minute?

10 Your premise here then, on this duration issue,
11 is that there is a social cost in extending protection
12 beyond the point at which it is needed.

13 DR. BAUMOL: That is right.

14 COMMISSIONER DIX: Now, that forces us back to the
15 definition of when it is needed, and when that ends.
16 But it seems to me that you have advanced a concept
17 which is new to me, and which I find helpful, that
18 there ought to be -- at the point where protection ends
19 -- still some value left in the cup.

20 DR. BAUMOL: That is precisely it.

21 COMMISSIONER DIX: Somebody ought to want to copy at
22 the point that protection ends. If you extend the protec-
23 tion to the point at which nobody wants to copy it, then
24 you have kept it on too long.

25 DR. BAUMOL: That is exactly right. And let me

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 add that our analysis also tries to provide some help
2 in judging where that intermediate/^{point}is. It does not give
3 the magic formula which tells you when you have
4 succeeded in squaring the circle, but it does give you at least
5 the elements which must be weighed--and shows what sort
6 of data one needs in order to weigh them.

7 So we have not merely confined ourselves to the
8 generalization that there is some intermediate period.
9 We said, "How does one go about evaluating that?"

10 COMMISSIONER DIX: Thank you.

11 JUDGE FULD: Any other questions?

12 MR. LEVINE: Just one comment, and that is,
13 obviously, that another factor that has to be considered
14 is the error factor, and whether it is better to err in
15 making the term too long than making it too short --
16 what the pluses and minuses are.

17 DR. BAUMOL: Indeed, That is true in any
18 decision process. There are errors both ways. I could
19 not agree more with what you have just said! But one
20 should be careful in not making that statement sound as
21 though it is implying one answer is more correct than
22 the other. Ignorance is ignorance, and does not weigh
23 more on one side than it does on the other.

24 JUDGE FULD: Again, our thanks.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 DR. BAUMOL: Thank you very much.

2 JUDGE FULD: We will recess until 1:30.

3 (Whereupon, at 12:10 p.m., the meeting was
4 recessed until 1:30 o'clock, p.m., on the same day.)

5 -oOo-
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

- AFTERNOON SESSION -

JUDGE FULD: Our next speaker is Roy G. Saltman. He is Program Manager for Technology Transfer at the Institute for Computer Sciences and Technology of the National Bureau of Standards. His area of interest is the impact of technology on the Federal Government and on our Society, in general.

He served as Executive Secretary of the Committee on Automation Opportunities in the Service Areas of the Federal Council for Science and Technology, and as Project Director of the NBS Study on the Effective Use of Computing Technology. He has been active in the Computing field for more than twenty years, serving in both the private and the public sector and has Degrees in both Engineering and Public Policy.

It is a pleasure to welcome you, Dr. Saltman.

STATEMENT BY ROY G. SALTMAN
Institute for Computer Sciences and Technology
National Bureau of Standards

MR. SALTMAN: Thank you, Judge Fuld and Members of the Commission. Thank you for giving me the opportunity to share with you some of our project's preliminary results. The project is more or less completed, but the project's final report has to go through the review process of the Bureau of Standards and, as such, I must necessarily call the results "preliminary," but I think they have been well

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 considered.

2 This study began in October 1974, before the
3 establishment of CONTU, and has been sponsored by the
4 Division of Science Information of the National Science
5 Foundation. The objective of this project has been to
6 study the impact of computer technology and copyright on
7 the availability of computerized scientific and technical
8 information. As such, an analysis of the interaction of
9 law, computer technology, and economics has been required.

10 As you may know, the originator of the concept
11 of this project was Michael Keplinger, your Assistant
12 Executive Director. Among the eight members of the project's
13 Advisory Panel have been Commission Members Arthur Miller
14 and Barbara Ringer. Thus, the project's connection with
15 CONTU has been more than coincidental. Through Mr. Keplinger's
16 assistance, and with the concurrence of Executive Director
17 Arthur Levine, the project has benefitted from discussions
18 held with the professional staff of CONTU. It is most
19 appropriate, therefore, that the project's pertinent
20 results be presented to you.

21 Let me state very clearly and emphatically,
22 however, that the project's work has been pursued
23 independently. While the assistance of the members of
24 CONTU and its professional staff is gratefully acknowledged,
25 the project's findings, recommendations, and conclusions are

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 solely its own. Furthermore, sponsorship or acknowledge-
2 ment of assistance rendered should not be construed as
3 necessarily implying the concurrence in the results of this
4 study by the sponsor, the National Science Foundation, or
5 of CONTU. In addition, permit me to cite the indispensable
6 assistance in copyright law received from Abe A. Goldman,
7 retired General Counsel to the Copyright Office, whose
8 services were made available to us through a contract with
9 CRC Systems, Inc.; as well as the assistance of Professors
10 of Economics Yale Braunstein and Janusz Ordover of New York
11 University.

12 The subject of this study has not concerned an
13 activity in which there is a comprehensive or coordinated
14 investment program aimed at achieving a specific goal.
15 Consequently, recommendations are not based on a quantifica-
16 tion of benefits and a resulting cost-benefit comparison--
17 as is the case with many policy analyses. In order to
18 establish a firm basis for recommendations, basic principles
19 of copyright have been surveyed; and an analysis has been
20 made of the impact of information technology on copyright
21 law as that technology has advanced during the Twentieth
22 Century. That particular aspect of the project was
23 carried out by Abe Goldman and, as to the specific chapter
24 and report on that subject, I will not be reporting on that
25 particular aspect of the project, today.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Fundamental concepts of economics have been
2 reviewed to assure that recommendations are well-grounded
3 in that discipline.

4 As an outcome of the evaluation of fundamentals
5 and of the historical analyses, it has been possible to
6 enumerate a set of basic principles that are employed as
7 the foundation of the recommendations. The project proposes
8 these "Findings of Basic Principles" in the sense of what
9 Professor David Truman has called "the rules of the game"
10 in his classic study of pluralism, The Governmental Process.
11 Truman found that while opposing interest groups might
12 contend specific property rights, the members of the groups
13 shared common fundamental views and attitudes that prevented
14 the erosion of individual rights that would have the effect
15 of hurting everyone.

16 In addition to the findings and recommendations,
17 conclusions have been drawn by the project about methods of
18 reducing transaction costs in the marketplace for copy-
19 righted works, about the impact of technological change
20 on policymaking, and about the existing and expected
21 mechanism of policymaking in copyright. Certainly these
22 findings, conclusions and recommendations of this study
23 are not to be taken as the final, definite view. Other
24 analyses of the legal and historical precedents may reveal
25 different interpretations and, consequently, different

1 conclusions and recommendations.

2 The Findings of Basic Principles are as follows:

3 1. The concept of common law copyright conforms
4 to the philosophy of the Enlightenment, enunciated by John
5 Locke, that each person has the right to the fruits of
6 his creations.

7 2. Due to the inherent rights in the copy, an
8 intrinsic market failure results from the ease of copying
9 or plagiarism of intellectual property. Correction of
10 the failure requires the public good of statutory copyright
11 protection.

12 3. The principle of inherent ownership and conse-
13 quent statutory protection do not imply a value judgment as
14 to the relative merit of an individual work, or the inherent
15 right to financial remuneration. The economic value of
16 a work is to be determined in the marketplace where copyrig
17 protects the distributors of intellectual works, as well as
18 the creators.

19 4. If free economic competition is possible,
20 opportunities for it should be maximized, including
21 opportunities for entry of new products and new competitors

22 5. Copyright protection assumes the concept of
23 the quid pro quo of social contract. The application of
24 this concept requires that, in return for the protection
25 of law, the copyright holder make a public disclosure of

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 his work.

2 6. The dissemination of scientific and technical
3 information should be maximized, subject to resource
4 constraints, excepting where such principles as personal
5 privacy, trade secrecy and national security take precedence

6 7. There would be transaction costs attached
7 to the market for intellectual property even if there were
8 no copyright protection. The trade-off in structuring the
9 market is in the kinds of transaction costs society is
10 willing to tolerate, as well as the size of such costs.
11 All other things being equal, the size of transaction
12 costs should be minimized.

13 8. Decision making on copyright involves the
14 achievement of a balance of equities between user needs
15 and owner rights that should include consideration of the
16 general public, as well.

17 Rather than justify these particular findings
18 at this moment, I would prefer to present, for your
19 consideration, a discussion of the study's recommenda-
20 tions related to computer programs and computerized data
21 bases.

22 I think you will find that, during this
23 presentation, I will make reference to these findings
24 of basic principles and that they will, in a sense, be
25 discussed in the course of the discussion.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Some of the questions concerning the copyright-
2 ability of computer programs are these:

3 (a) Is a computer program the writing of an
4 author and, thus, eligible for copyright protection under
5 the Constitution?

6 (b) Is a computer program a "literary work"?

7 (c) Can a computer program be sufficiently
8 "original" that it meets the requirements for a copyrighted
9 work?

10 (d) Should a program in object code be treated
11 any differently, under copyright, than a program in a source
12 language?

13 (e) Should copyright protection be denied com-
14 puter programs on the basis of the strength of the software
15 industry?

16 (f) Is protection of the specific expression of
17 of
18 a program-but not/the underlying conception-sufficient
19 protection to be valuable?

20 (g) How long should protection last, if a
21 program is copyrightable?

22 (h) What should be a buyer's usage rights in a
23 program.

24 On the subject of the writing of an author,
25 in general, a computer program is written by a human being,
 and is written in a specific formal language. In general
 -- just to deviate from the text for just a minute -- a

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 high level language is a specific formal language in
2 the linguistic sense of having a specific syntax, and --
3 when one writes in a formal language -- one in effect
4 uses that syntax of the language and "natural" language,
5 in which we generally speak -- that is, English or any
6 other common natural language -- has a great many redundancies
7 in it, and many meanings -- subtle meanings -- which cannot
8 be put in a formal language but, nevertheless, such
9 language is being described, in a sense, as "formal
10 language" through the expertise available in linguistics.

11 Those persons engaged in the occupational specialties
12 of writing programs are known as programmers. I believe
13 that there are about two or three thousand people capable,
14 in this Country, of writing programs, mainly in high level
15 language, but some of them are more specialized in what
16 we might call "assembly language" and some even in what
17 might be called "object code".

18 Others engaged in the tasks of determining
19 requirements for blocking out the logical flow of
20 programs may be known as systems analysts. Engineers,
21 scientists, and others may write programs or conceptualize
22 them for a programmer's use in the course of using a
23 computer to assist them in solving problems in which
24 they are engaged. In the United States today, there
25 are probably several million persons who can comprehend --

1 at least superficially--a computer program written in FORTRAN
2 a widely-used programming language.

3 In opposition to the copyrightability of
4 computer programs, the point has been made that a computer
5 program is a set of instructions for a machine, and, in
6 fact, according to this view,--since the machine cannot
7 operate without the program,--the program is really "part
8 of the machine". Thus, programmers are really engaged
9 in "machine design", according to this argument, and the
10 output of their work is more appropriately protected
11 under a different legal mechanism than copyright.

12 Several points can be made in rebuttal to this
13 line of reasoning.

14 First, there is nothing inherent in a computer
15 program that cannot be carried out by trained human
16 labor,--given either enough time or enough people to under-
17 take the work. That is, the computer program written by
18 a programmer is a set of instructions understandable by
19 other persons; and it consists of individual steps that are
20 possible to be accomplished by trained humans, if the time
21 restraints are relaxed. The capabilities' needs are these:

22 (a) The ability to distinguish negative, zero,
23 and positive numbers;

24 (b) The ability to perform arithmetic and
25 elementary Boolean algebra; and

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 (c) The ability to currently select the next
2 instruction, given explicit and unambiguous directions
3 as to where to find it.

4 It hardly seems fair to the author of such a
5 set of instructions, or as to the public interest in
6 economic efficiency, to deny Government protection to the
7 author's expression simply because, for purposes of speed
8 and accuracy, the instructions are to be carried out by
9 machine instead of by human labor.

10 If it is to be put forward that computer programs
11 are not in a language in which humans speak to each other,
12 that point can be accepted without damaging the case for
13 copyrightability. Categories of works now copyrightable
14 include musical works -- that is, sheet music, not neces-
15 sarily including any accompanying words; pantomines and
16 choreographic works; and pictorial, graphic and sculptural
17 works. None of these communicate to humans in natural
18 language.

19 Certainly included in the category of pictorial
20 and graphic works are engineering and architectural drawings
21 and schematic diagrams, all of which can be employed as
22 instructions to those persons engaged in the construction
23 of machines, devices, and structures.

24 Close to the concept of the computer program
25 is musical notation, and similar notations for sequences of

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 choreographic motions. Musical notation is, in essence,
2 a set of instructions for the operation of mechanical devices
3 so as to produce a particular sequence of sounds, each with
4 a particular pitch for particular lengths of time. It
5 follows that the question whether a computer analysis program
6 is still a computer is analogous to the question of whether a
7 piano without someone playing it is still a piano! Dis-
8 cussion of such a question is not likely to be fruitful
9 in the present context.

10 It may be helpful to point out, however, that
11 a computer program is more than simply a set of instructions
12 used to operate a machine. Computer programs are involved,
13 in their operational use, in a variety of real human
14 purposes. Some of those purposes involve research and other
15 professional activities, while other purposes may appear to
16 be mundane. However, the development of a computer program
17 that will be used in connection with any real human purpose
18 must include an understanding of the human and physical
19 systems with which the program will be associated.

20 Implicit in any set of calculations that represent
21 the real world is a model of that portion of the real world.
22 Clearly, the computer programs now in use throughout the
23 United States that assist physicians in the diagnosis of
24 heart ailments on the basis of an analysis of electrocardio-
25 gram signals constitute models of the heart's operation

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Similarly, but perhaps not so obviously, accountants have
2 begun to realize that the system of financial records of an
3 organization including the records of collections, inventory
4 and disbursements, is nothing less than a financial model
5 of the organization.

6 In effect, the computer program is an implementa-
7 tion of the view that the physical world, and at least part
8 of the human world, is amenable to rational analysis and
9 quantification, and to understanding deduced from these
10 processes. Scientists, engineers, economists and statis-
11 ticians must be listed among those whose core of professional
12 work conforms to this view. No person need accept this view,
13 either in its entirety, or uncritically. In fact, a world
14 run solely on the basis of this view might very well lack
15 fundamental and essential value judgments that cannot be
16 deduced or quantified.

17 Copyright protection, however, as pointed out in
18 the Findings of Basic Principles, requires no value
19 judgment as to the individual merit of a particular
20 writing of an author; and it is clear that the program
21 in source language written by a programmer is such a
22 writing.

23 While the most fundamental statutory test of
24 copyrightability is whether the category in question constitutes
25 "a writing of an author," it is useful to further consider
the Basic Principles.

1104 GARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Under these Principles, this study finds that the author
2 of a computer program is entitled to the fruits of his
3 creation; and that the ease of copying of this form of
4 intellectual property constitutes an intrinsic market
5 failure, requiring the public good of statutory copyright
6 protection. In addition, this study finds that without
7 copyright protection for computer programs, losses in
8 information flow, increased procedures for secrecy, and less
9 opportunity for creativity would result. I will cover
10 that last statement in greater detail.

11 Programs as Literary Works: Seven categories of
12 works are now granted protection under Section 102 of the
13 1976 General Revision of Copyright Law. While the definition
14 of "literary works" given in Section 101 of the new Act
15 is broad enough to include computer programs, it is not
16 necessary that computer programs be defined for purposes
17 of the statute as literary works. An alternative is a
18 new category of copyrightable work to be enumerated in
19 Section 102, namely: "Computer Programs".

20 One reason for consideration of this question is
21 that computer programs are used in different ways than
22 prose or poetry; as are the other six protected categories.
23 The limitations on exclusive rights granted to users of
24 literary works, for example, as specified in Section 110
25 of the 1976 General Revision, may or may not be appropriate

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 for computer programs. In particular, the applicability of
2 the limitations of Section 110 to computer programs used
3 for computer-assisted instructional purposes is worthy of
4 examination.

5 Similarly, as the uses to which computer programs
6 are put, or the manner in which they are used, differ from
7 more standard literary works, additional modifications of
8 the copyright statute may be appropriate to specify the
9 assignment of property rights with respect to each type of
10 work. Categorization of computer programs separately from
11 literary works might assist the process of specifying these
12 differences.

13 I will cover that point about the literary code
14 when we come to the object code. I want to make some comments
15 on that point, also.

16 On the subject of Originality: While no specific
17 research study can be identified yielding definitive results
18 that computer programs can be "original", as the meaning of
19 that term is understood in copyright law, experience and
20 knowledge of the field make possible an unequivocal affirma-
21 tive response.

22 Many books have been written on the subject of how
23 to write programs, and how to write better programs. If
24 originality were not possible, it would have been difficult,
25 if not impossible, for Gerald M. Weinberg to have

1 written the book The Psychology of Computer Programming
2 including sections on "programming as Human Performance"
3 and "Programming as an Individual Activity."

4 Similarly, it would have been far less likely for
5 Dennie Van Tassel to have written on "Program Style" in
6 his book on Program Style, Design, Efficiency, Debugging,
7 and Testing, or for Frederick P. Brooks, Jr., to have
8 written of "the joys of the craft" or of "craftsmanship"
9 in his book on The Mythical Man-Month, Essays on Software
10 Engineering.

11 The following quotation by Van Tassel supports
12 the concept of originality as well as the concept of the
13 program as the writing of an author:

14 "The main purpose of a program is to be read
15 by humans rather than machines. People must
16 read and understand the program in order to
17 correct, maintain, and modify it. If we were
18 concerned only with the machine, programs would
19 be written so machines could read them easier
20 than people could. Programs are also documents
21 for future reference, they are educational media
22 for instruction on coded algorithms, and they are
23 used for further development of better programs
24 "

25 Of course, the more complex a program's function,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

BUQUE (202) 347-0224

1 the greater the variety of unique ways of expressing the
2 steps in the performance. On the other hand, it is question-
3 able whether a program carrying out an elementary and well-
4 defined function--such as the calculation of the roots of
5 a second-order polynomial --could be considered "original".
6 This is, in essence, analogous, perhaps, to the title of
7 the story, which is generally not copyrightable -- a
8 very elementary kind of functional sentence which is so
9 elementary that it might not be considered to be "original"
10 by the Register of Copyrights, and so it might be denied
11 copyrightability.

12 We feel, however, that it is likely that the
13 registration process will be self-regulating.
14 Only programs having an intrinsic originality are likely
15 to be submitted for registration.

16 Protection of Object Code: I really am talking,
17 here, about the protection of object code as a computer
18 program--not as a sequence of ones and zeroes. We might note,
19 here, the differences between the different classes of
20 computer languages. There is what we call "high level
21 language", such as a formal language as I discussed
22 previously, which has specific syntax, closely related to
23 "natural language", but with elimination of the ambiguities,
24 so that a machine is perfectly clear on what it is to do
25 with these instructions.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

sig

1 COMMISSIONER CARY: Excuse me. Would FORTRAN fall
2 within that?

3 MR. SALTMAN: Yes it would, sir.

4 On a lower level, more machine-related, is
5 "assembly language". Assembly language is still a source
6 language in which many source programs are written. The
7 management programs for machines -- what are normally
8 called "operating systems", or, sometimes, "compilers"
9 -- are very often written in assembly language because
10 they are more machine related. They are management programs
11 which assist the machine in dealing with the application
12 programs that the programmers write to carry out functions.

13 Assembly language is a one-to-one relationship
14 with the machine code -- that is, in the machines that
15 are typically being used today. One does not know how
16 machines will be designed in the future, but the machines
17 that John Von Neumann had originally proposed are, in
18 effect, still being employed. Assembly language is a
19 kind of one-to-one relationship with machine code but,
20 nevertheless, a programmer can understand it. The
21 instructions are written in mnemonic form, and the operations
22 of the instructions still relate to the variables of a
23 problem rather than the machine addresses.

24 When one gets into object code, what happens
25 is that the mnemonic, which are the instructions,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 are converted into sequences of ones and zeroes, and
2 instead of dealing with the functional variables of a
3 problem, what you have is the absolute machine addresses
4 and the operants of instructions, and these, in general,
5 are represented in ones and zeroes. So that the
6 object code is an extremely machine-related situation.
7 So it is the conversion into symbols usable directly
8 by the computer of a source program written by the programmer

9 Now, it has been pointed out to me that if
10 someone submitted a sequence of ones and zeroes which would
11 be an object code to the Copyright Office as a literary work
12 -- under the category of a literary work -- the Copyright
13 Office, not having been given the previous submission of
14 similar sequences of ones and zeroes, would probably have
15 to accept for registration such sequences of ones and
16 zeroes.

17 The question in my mind is whether that could
18 be constituted as a computer program, not simply a
19 sequence of ones and zeroes accepted by the Copyright
20 Office for registration.

21 It seems to me that, if that is constituted
22 a computer program, then there is an implied ability
23 of the programmer, or the copyright owner, to begin
24 an infringement suit against somebody else who had written
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

P 40NE (202) 347-0224

1 a similar computer program.

2 Now, it may very well be that, if one were to
3 write a similar computer program -- similar enough to
4 be copied -- and changed the mnemonics in such a
5 fashion; and arranged for the computer programmer to
6 put, in a machine, a different sequences addresses,
7 one could still have an infringement, but the ones and
8 zeroes sequence would be different. So that somebody
9 who copyrighted a sequence of ones and zeroes would
10 actually not be protecting himself as well as he could.

11 COMMISSIONER CARY: May I interrupt you?

12 MR. SALTMAN: Yes.

13 COMMISSIONER CARY: Are you saying that the ones and
14 zeroes in the object code would be the same, even though
15 the two people had expressed themselves originally in
16 a different language?

17 MR. SALTMAN: No. The opposite. The opposite --
18 that if they, in effect, had the same logic, the
19 copier could very well have changed the sequence of
20 ones and zeroes for his computer -- it might be a different
21 computer -- or put in a different set of storage locations
22 and actually had a copying program, but it would not be
23 clear that it would be the same because the sequence of
24 ones and zeroes might very well be different.

25 It would be extremely hard -- it would be

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 extremely hard -- for the Register of Copyrights to compare
2 two such programs to determine whether they were the same.

3 COMMISSIONER CARY: I don't agree with you.

4 MR. SALTMAN: And, furthermore, it would be
5 extremely hard for the facts to be determined in an
6 infringement suit. But I say, you know, under the
7 present copyright law, it seems to me very clear that
8 someone could take a sequence of ones and zeroes, put them
9 on a piece of paper, and submit them to the Copyright
10 Office for registration and, under the Literary Work
11 definition, I don't see how they could refuse to accept
12 it. But whether that would protect the copyright owner
13 in any way excepting for the exact sequence of ones and
14 zeroes, I hesitate to say.

15 Okay.

16 Now, my question here is, whether, with respect
17 to object code, it should be able to be copyrighted
18 independently of the program written in source language.
19 If it were independently copyrightable, a programmer could
20 submit the object code to the Copyright Office for
21 registration and never disclose the source statements
22 at all.

23 This study finds that the independent copy-
24 rightability of object code is not in accord with the basic
25 principles on which its recommendations are based. The

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 object code is unreadable by a person--except with
2 enormous difficulty. As a result, copyright registration
3 of object code discloses almost nothing in return for
4 the full protection of law. Information transfer is
5 deliberately minimized, not maximized. Furthermore, it
6 appears to this study that it would be exceedingly difficult
7 for the Copyright Office to assure that the object code was
8 "original" for registration purposes, and similarly difficult
9 for the facts to be determined in an infringement action.

10 Now, my suggestion here -- it is not said in the
11 report -- but it seems to me -- it was pointed out to
12 me at lunch -- that someone could really write a program
13 in object code and maybe, in the new micro-computers,
14 they may very well do so. It is unlikely that such a
15 program would be very long. I think that, as one increases
16 the length of the program, one would/have to mechanize that
17 process, through a computer or otherwise. A human being
18 is limited, after all, by a certain amount of storage
19 in the human brain. Certainly, chess games would be
20 far less enjoyable than they are now if one could determine
21 what the final solution of the chess game could be,
22 immediately. But humans are limited and, therefore, the
23 lengths of such object programs are limited.

24 Now, it seems to me that for copy registration
25 of an object code, it would not be difficult to require

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 the programmer of an object code to convert it back into
2 assembly language with mnemonic use of instructions,
3 and the mnemonic use of variables in a problem-
4 oriented manner, such that it then becomes a computer
5 program in source language. And, since object programs
6 are not likely to be long, it is not likely to be a large
7 imposition on such a writer of an object code, if he were
8 to do so, to require that to be done if it were to be
9 copyrightable in the form of a computer program. And
10 that is why I think the difference between a literary work
11 and a computer program ought to be made clear, because
12 a computer program implies something different than a
13 sequence of ones and zeroes. It implies some kind of
14 meaningful set of logical operations.

15 Now, my statements here should not be understood
16 as implying the conclusion that an object code is not
17 protectable at all. The copyrightability of programs
18 in source language would have very little value if the
19 object code could be produced or copied with impunity.
20 It is concluded, therefore, that the conversion of a source
21 program into object code, which implies no addition to the
22 logic of the program and, therefore, no value added,
23 constitutes the making of a copy. Thus, object code
24 should be protected by virtue of the copyright in the source
25 program, which, as I said, could be either in high level

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHO 3F (202) 347-0224

1 language, or in assembly language.

2 It may be noted that, in the process of producing
3 object code from a source program, the usual procedure is
4 to combine certain necessary operating parameters into
5 the object code. These parameters often select the
6 specific peripheral units that will be used with the program
7 when the program is run and, also, often select the location
8 of the program in the computer storage units. In view of
9 this study, these additions to the object code constitute
10 almost nothing that could be classed as original works
11 of authorship. Thus, the generation of object code,
12 even with the addition of these housekeeping functions,
13 cannot be classed as the preparation of a derivative work.

14 The translation of a source program from one
15 source language to another source language should be
16 considered the preparation of a derivative work. The
17 translation makes possible the understanding of the
18 program by an additional group of persons, and provides
19 for wider dissemination and use.

20 One argument against copyrightability of computer
21 programs is that the industry is burgeoning, and therefore
22 copyright is unnecessary. It must be noted, however, that
23 copyright does not specifically protect an industry but,
24 rather, a particular work, in the marketplace.

25 This study has examined the arguments contained

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 in two articles in which the possibility of the elimination
2 of copyright protection is discussed.

3 Now, Economists Robert M. Hurt and Robert M.
4 Schuchman discussed in their article, the protection
5 of books -- that is, the strategies for one author's
6 protection of books under the conditions of new Copyright
7 and, in an article in 1970, in the Harvard Law Review,
8 Professor Breyer proposed a strategy that could ^{be} employed
9 by program developers in the absence of such protection.

10 A quotation from this article is as follows:

11 "One may wonder, for example, whether, without
12 protection, smaller hardware or software firms
13 would not find it easier to use parts of IBM
14 programs in their efforts to compete with IBM."

15 Similarly, one can say that it is just as likely
16 for a large competitor to use parts of a smaller competitor's
17 program -- as it is for the reverse to occur.

18 Professor Breyer did not extend his scenario.
19 It is possible to theorize about protective behaviors
20 available to the originators of computer programs --
21 that is, large organizations or small -- to protect
22 themselves in such hypothetical situation.

23 One such strategy could be for an originator
24 to produce programs for sale in object code only, with
25 minimum documentation, thereby making it very difficult

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 for a potential copier to know exactly what he had in hand.
2 In fact, a proposal for a so-called "sealed-in-software"
3 that might be protectable by either trade secret or copy-
4 right has been made recently by Calvin Mooers in the
5 magazine Computer. I believe that was the March 1977
6 issue.

7 A conclusion that can be drawn from both of
8 these examples is that there are transaction costs,
9 regardless of whether the imperfect protection of law
10 exists, or does not exist. Professor Kenneth Arrow has
11 written:

12 " transaction costs.... are attached to
13 any market and indeed to any mode of resource
14 allocation."

15 And that certainly includes a market that does
16 not have copyright, as well as one that does. In both of
17 these examples, I think we have come to the conclusion
18 that -- certainly in the Breyer example, which speci-
19 fically relates to computer programs -- assuming the
20 protective strategy of object code dissemination only with
21 minimal documentation, among the transaction costs to be
22 expected are the reduction in information dissemination
23 about program content to everyone, including disinterested
24 observers who might benefit in another context, the
25 reduction in ability to recognize mistakes in programs and

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 to correct them, and the lowering of incentives to produce
2 new programs that are genuinely novel or original.

3 So we postulate, therefore, where there is no
4 Government copyright protection, that cut-throat competi-
5 losses in information flow, and increases in secrecy would
6 result. In a society in which the market protection
7 of copyright is available, Government regulation has its
8 cost and some infringement from imperfect exclusion can
9 be expected to result, but we suggest that, in addition,
10 a more open society with greater opportunities for
11 creativity exists. Thus the choice is not just between
12 the size of transaction costs inherent in the alternatives
13 but in the kinds of costs and their effects on society,
14 which society is willing to tolerate.

15 This study concludes that copyright protection is
16 particularly important for the smaller entrepreneur who
17 does not have the resources to engage in the kind of
18 retaliatory measures suggested by Hurt and Schuchman, or to
19 protect himself against the predatory practice proposed
20 by Breyer. Copyrightability promotes free competition
21 and innovations. These aspects of the marketplace are as
22 important criteria for public policy towards an industry,
23 as are growth and size of the industry.

24 It is clear from the concept of copyright and
25 from Section 102(b) of the 1976 General Revision, that only

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 the "expression" of a program could be protected.

2 The question may be asked whether protecting the
3 expression only, rather than the concept, is valuable. An
4 answer is that copyright protection hopes to prevent a major
5 type of market failure with regard to computer programs,
6 but cannot claim to protect against all types of market
7 failure. Therefore, copyright protection is valuable,
8 but not valuable for every purpose.

9 It is important to note that unauthorized copying
10 of computer programs, even without any further use of
11 dissemination of the concepts of the programs, is a
12 major type of market failure. The reason this is true
13 is that examination of the program code to determine any
14 unique concepts contained therein requires the expenditure
15 of significant resources; while copying by itself requires
16 only a bare minimum of resources. The copier who is assured
17 that the program in question performs the functions he
18 desires in an error-free manner has obtained something useful
19 and of considerable value, at minimum expense.

20 On the other hand, the disclosure of unique
21 concepts, certainly, will assist competitors in the
22 development of competing programs. But, whether a particular
23 unique or innovative design concept is protectable, would
24 depend on how a Statute -- such as the patent law --
25 protecting such concepts might be written, or might be

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

FD-302 (Rev. 12-13-60) 347-0224

1 interpreted. This presentation is not the proper vehicle
2 for a detailed discussion of this matter; but it can be
3 pointed out that very few programs contain -- or need to
4 contain -- new concepts as unique as the simplex method
5 for the solution of linear programming problems or the fast
6 fourier transform algorithm. Both of these were outstanding
7 advances in computational procedures and, conceivably,
8 of the type acceptable for additional protection.

9 For the most part, what is required of programs
10 is that they carry out their intended functions with
11 precision, and in an error-free manner. Performance is
12 improved if, in addition, programs minimize execution
13 time and use of storage space to the extent practicable.
14 I might point out that the major difference between programs
15 today is, in a sense, those functions; whether they carry
16 out their functions with precision, in error-free manner,
17 with minimized execution time and use of storage space.
18 The variation in computer programs on those parameters,
19 I think, is an indication of the different competencies,
20 and the need for the use of originality by programmers
21 in the design and development of computer programs.

22 As regards the unique and innovating programming
23 concepts, I would say there clearly appears to be room
24 for further study on this subject.

25 Now, in the study on Duration of Protection, it

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 seems reasonable to suppose that the author of a computer
2 program should not be treated any differently than the author
3 of any other type of copyrightable work.

4 Now, with regard to what Professor Baumol said
5 this morning-- to set the length of protection to such
6 a point where the benefits might overcome the cost to a
7 maximum degree--I would have to modify what I said: simply
8 to say that, if that were done for computer programs, it
9 seems reasonable to propose that that should be done for
10 other copyrightable works, as well. Then you start
11 saying that, really, the author of a computer program
12 should not be treated any differently than the author of
13 any other kinds of work,

14 A reason that has been given for proposing
15 a shorter duration of copyright is that, with changing
16 technology, computer programs would become valueless
17 after several years. However, if the recommendation of
18 this study is adopted, that an original copyright should be
19 obtainable only in the source program, and not in the
20 object code, then a separation of the programmer's
21 expression from the hardware technology is encouraged.

22 Furthermore, even if popular source languages
23 are altered or improved, or if new source languages arise,
24 the copyright proprietor retains the right to modify his
25 work, or prepare derivative works, permitting him to

1 update the program as required. The writing of programs, in
2 source languages that can be expected to endure, is
3 promoted.

4 Now, the Right of Computer Use: It has been
5 often asked by computer users that, if the copyright
6 holder retains the right of exclusive use, how is the
7 computer user supposed to use the program?

8 Would he constantly have to make agreements with
9 the author, or the copyright proprietor, in order to use the
10 program?

11 And I would have to agree that the right of use
12 of a program is meaningful and is an inclusive right which,
13 in general, devolves upon the copyright owner.

14 However, we may note that there are other kinds
15 of copyrighted works that don't require a right of use -- in
16 this case because of technology -- and it would be very
17 useful, and would minimize transaction costs, if that
18 could occur with computer readable works. I see that
19 occurring with computer readable works, if the computer-
20 readable work can be sold, and transfer of ownership of
21 the copy would result in the transfer of exclusive right
22 to use and, of course, that exclusive right to use would
23 be the right to use for the purposes of the individual
24 user, or for the company that he represents, but not
25 in general for further distribution in a network sense.

1 So that the right of use would evolve upon
2 the owner of a transfer of a copy -- that is, the owner
3 of a copy would have the right of use -- but this right
4 of use would be limited to his own use, so that the
5 computer program, or the computer data base -- as the
6 case may be -- might not be put on a network for external
7 users and, thereby, eliminate further sales of the
8 computer data base, or the computer program, to these
9 outsiders who might use the work through a network.

10 COMMISSIONERCARY: Stated another way, you are saying,
11 are you not, that if he did put it on network, that is an
12 infringement.

13 MR. SALTMAN: Yes. Yes. For the use of outsiders,
14 outside of the organization.

15 By the way, I have not intended to describe it
16 here, but we have had some results produced by Professor
17 Ordoover of New York University in cooperation with
18 Dr. Willig of Bell Laboratories. This appears as an
19 appendix to the work, which describes some mathematical
20 results which demonstrate that it is economically correct
21 -- or, I should say, "economically efficient" -- to permit
22 a difference in subscription rate between individual
23 subscribers and institutional subscribers to, let's say,
24 scientific journals. This was done in four scientific
25 journals. That is, the mathematics demonstrate that it is

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

P. LOVE (202) 347-0224

1 economically efficient for a price discrimination to exist
2 between individual and institutional subscribers.

3 One could extend this concept to works on
4 computer readable media, as was talked about some years
5 ago, where it was suggested that hard copy of works would
6 disappear, and would be replaced by works on electronical
7 media that would be distributed through the networks.

8 Well, if the concept of price differential between
9 individual and institutional subscribers was adopted for
10 such a situation, it would be reasonable to then use such
11 a price differential in order to permit the copyright
12 proprietor to obtain returns under such a situation.

13 We have not, however, looked at the legalities
14 of price discrimination, by the way. I mean, I am saying
15 here that by proposing a price differential, we
16 assume that all legal problems have been worked out. I heard
17 recently of some difficulties with this kind of an
18 arrangement. So that, economically efficient, or not,
19 we don't propose it because we don't know where all of
20 the legal implications are.

21 Let me go on to computerized data bases.

22 There are two issues that we looked at in
23 computerized data bases, that I think are important to
24 mention to you, here.

25 One is the disclosure at the time of registration,

and the second is the definition of "publication" for data bases published only in computer-readable form.

The maximum statutory requirements for registration -- of a literary work -- must include, in the case of an unpublished work, one complete copy and, in the case of a published work, two complete copies. These requirements are listed in Section 408(b) of the 1976 General Revision.

The Register of Copyrights is authorized to permit, for particular classes of works -- with classes defined by the Register -- "..... the deposit of identifying material instead of copies" as stated in Section 408(c)(1). Furthermore, "..... the Register of Copyrights may, by regulation, exempt any categories of material from the deposit requirements". And they are talking about the Library of Congress. This is stated in Section 407(c).

On the basis of findings of basic principles which I referred to, which were developed from the concepts embodied in several reports of various National Science Foundation Committees, and Science Advisory Committee and Committees of the Federal Council of Science and Technology -- it is concluded that the transfer of information is extremely important, and there seems to be an underlying philosophy that, again, such

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

6-10-01E (202) 347-0224

1 information should be maximized when that is possible.

2 Therefore, we have concluded that it would be important
3 for the deposit of the complete data base, rather than
4 simply identifying material.

5 Now, it is hoped, of course, that that would
6 not provide an insuperable barrier to the copyright
7 proprietors but, on the other hand, it would be consistent
8 with the quid pro quo of disclosure for protection, and it
9 would be an aid to scholarship, to historical review, and
10 to the generation of new ideas for the future.

11 Now, it seems reasonable, of course, that
12 since many, many, data bases are updated completely, even
13 on a weekly or a monthly basis, that such a complete re-
14 submission would be a barrier and an unfortunate require-
15 ment, if it were so required.

16 Therefore, it seems reasonable that such
17 submissions of changes in the data base ought to be done,
18 perhaps, on a single year basis, with complete resubmissions
19 of the data base done on a multi-year basis, say ten,
20 and I have to admit that these numbers are, of course,
21 taken out of the air, and I have no economic basis for
22 using such numbers.

23 But there has to be, I think, to meet the
24 findings of the basic principles, somehow, an understanding
25 of the disclosure for protection concepts and, hopefully,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 an implementation of the concept of maximum transfer of
2 information where such is possible.

3 The other point on data bases that was discussed
4 by the study was the problem of publication of a data
5 base when it was done only in computer readable form.

6 In reading the concept of the definition of
7 "publication" from the new Act, it would seem that a
8 certain amount of additional precision ought to be applied
9 to such ^a concept as the concept of publication when
10 computerized data bases are being considered.

11 One of the problems is the definition of the
12 word "group", in the definition of what constitutes
13 publication. Distribution to a group constitutes
14 publication.

15 How many distributees must one have before
16 they become a group?

17 That is not, really, defined anywhere.

18 Also, the problem of "What is it
19 that is published", when the only thing that changes
20 hands is a printout at a terminal, which is not part of
21 the complete data base. That is very typical for
22 computerized data bases to be distributed only at
23 terminals where the users obtain printouts of only part
24 of the data base -- not the whole data base. That is,
25 they only obtain printouts of the responses to queries

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 that they have entered into the data base.

2 Now, one can wonder whether such a data base
3 can be considered to be published, and it is not clearly,
4 really, in our opinion -- in the opinion of the study --
5 that that is well defined. Certainly, if the printout
6 from the data base is provided to the user under no further
7 restrictions as to further disclosure, then, certainly,
8 the printout is "published." But it would seem to be
9 reasonable, under those circumstances, that the complete
10 data base ought to be considered published as well --
11 even though only the printouts are, really, distributed.

12 COMMISSIONER CARY: Would you suggest, or would you
13 consider the possibility of including a copyright notice on
14 each printout, so that even if it were considered
15 published --

16 MR. SALTMAN (Interposing) I think that a prudent
17 publisher would do so, even if it were not clear whether
18 it would be published, or not. I think it would probably
19 be on the printout. I think, to protect oneself -- as
20 a matter of fact, I do say so -- that it probably would
21 be on there. That is, certainly, a prudent publisher
22 would cause the computer to print out the copyright
23 notice on each printout. So that would be "published."

24 Now, whether the data base, itself -- having
25 not been disclosed, but only the printouts having been

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 disclosed -- is publishable, it seems to me to be question-
2 able, at the present time. I think it is worthy of your
3 consideration as to whether the data base in a computerized
4 form, with only parts of the data base that are published
5 in printout form, is really published.

6 That was the other comment that we had on data
7 bases.

8 Now, there are other things in the report, of
9 course, besides what I have described to you today.

10 We have considered the foundations of copyright;
11 some of the decision-making on copyright as expected by
12 technological change, going back to about 1903, considering,
13 of course, White - Smith versus Apollo, and various cases,
14 up until Williams and Wilkins, showing how technological
15 change affected-how the Courts treated technological change
16 as it came along, and it was not clear from the original
17 law, as written, whether the new concept -- the new change
18 -- fit within the law, or did not fit within the law.

19 We also have considered some economic concepts
20 regarding, as we said, the price differential between
21 individual and institutional subscribers, and some
22 aspects of the clearing houses -- blanket license versus
23 "per use" license -- but I did not intend to describe that
24 to you today.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 We also have looked at policy making models for
2 copyright, putting it in the Political Science framework
3 as is normally done in political decision making and,
4 hopefully, drawing some useful conclusions in this matter.

5 But, as I say, I did not intend to present that
6 to you because it is not immediately pertinent to your
7 consideration.

8 But I certainly thank you for your attention.

9 I would like to say that -- what is it called
10 here -- the title in your agenda/today, -- the title that
11 is given, may have been the original title for the project.
12 We, at NBS referred to it simply as Copyright Policy and
13 Information Systems, and I hope the title of the final
14 report will be "Copyright in Computer Readable Works,
15 Policy Impacts of Technological Change".

16 I hope that will be the title of the final report.

17 Thank you very much for your attention. I would
18 be happy to answer any questions.

19 JUDGE FULD: Any questions?

20 Yes, Mr. Frase.

21 MR. FRASE: Mr. Saltman, when is your complete
22 report going to be available?

23 MR. SALTMAN: I hope that it will be available
24 within a month or so, and I simply say that because it has
25 to go through a certain final review at the National Bureau

1 of Standards, and it has to be published -- that is, made
2 available in published form for distribution.

3 I just say 30 days as a rough estimate of that.

4 COMMISSIONER CARY: This will probably be available from
5 N.T.I.S.

6 MR. SALTMAN: Yes. Yes. I hope so. I hope
7 it will be a special publication of the Bureau of
8 Standards, and I guess it will be available from N.T.I.S.,
9 certainly, yes.

10 JUDGE FULD: Mr. Hersey.

11 COMMISSIONER HERSEY: On the object program --

12
13 Would you make a differentiation
14 between the concept of ^{the} object program as a copy of the
15 source program and a copy made of the object program?
16 And how should copyright deal with this difference?

17 MR. SALTMAN: A copy of the object program?

18 Well, as I said, the object program I envision
19 to be, in a sense, a copy of the source program.

20 Now, another copy of that program is still
21 another copy.

22 I am sorry. Do I understand the full impact of
23 what you are asking?

24 COMMISSIONER HERSEY: You would regard a copy of the
25 object program as another "copy" of the source program?

1 MR. SALTMAN: In effect, yes.

2 COMMISSIONER HERSEY: Well, I would like to point out--
3 just to the Commissioners that, as long as we think of
4 FORTAN copyright for the object program -- which is a
5 mechanical device -- we are bound to run into contradictions
6 and euphemisms. This study describes the object program
7 as a copy of the source program.

8 The next to the last version of the Subcommittee
9 Report describes the object program as a derivative work.
10 The final version of the Subcommittee Report does not make
11 any distinction between the source program and the object
12 program, and describes the object as a literary work.

13 I think that, as long as we try to get this
14 mechanical device into copyright, we are bound to have this
15 kind of difficulty in dealing with just what the object
16 program is.

17 I have, absolutely, no quarrel with your case for
18 copyright for this source program, and it is only when you
19 get to the object program that the difficulty arises, and
20 it will rise, I think, again and again, because I think,
21 at that point, something different has been produced.

22 Supposing you had an absolutely free political
23 situation, and you could make a choice between this way of
24 dealing with source and object programs through copyright,
25

1 and devising a new legislative form to deal with it. What
2 would your choice be?

3 MR. SALTMAN: I have to say that there is either
4 copyright protection, or there is protection of innovative
5 ideas. There is either one or the other, and it doesn't
6 matter what names you give them. You are, in effect,
7 either protecting the expression; or you are protecting
8 more than the expression.

9 Now, whether you call that copyright, or call
10 it something else, I think there is still protection for the
11 expression. As has been pointed out to me, if you start
12 to protect the innovative ideas, you must first of all
13 define what is innovative. You probably have to, then,
14 begin a process of maintaining a state-of-the-art -- that
15 is, you may, in effect, have a patent kind of situation
16 where you have searches and extensive investigation of
17 what has been already -- if I may use the word -- patented
18 or not patented. Then you are more or less starting a
19 more difficult situation -- a more costly situation,
20 certainly.

21 Now, I mentioned two advances in programming
22 techniques. Actually, they were mathematical techniques
23 more than they were computer program techniques. But if
24 the computer had not been there, there would have been
25 absolutely no use for them. So that one may consider them

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 to be program techniques, as well as mathematical techniques:
2 namely, the simplex method for the solution of linear
3 programming problems, and the fast fourier transform
4 technique.

5 Now, both of those are very advanced and innova-
6 tive ideas, in my opinion, in mathematical techniques,
7 and, if the situation were right at the time that they were
8 invented, I would at least consider them to be
9 the kinds of inventions that certainly fall under the
10 classification of "new" and "innovative."

11 Now, in addition, there may be -- now, those
12 are mathematical. There might be some in computer programs.
13 There certainly could be other kinds of innovations which
14 relate to the computer itself, rather than the mathematical
15 techniques of problem solving -- techniques of, oh, storage
16 allocation, for example, where storage is conserved
17 and under much higher conditions, much stronger conditions,
18 than are now possible; those kinds of techniques which
19 relate to computers that might appear on programs --
20 not in machine design, but in programs.

21 I do distinguish between machines and programs.

22 They might conceivably be acceptable for additional
23 innovation. I don't want to say that they are, or are not,
24 because that would be a policy statement that I don't wish
25 to make, but I am saying -- I throw up the possibility --

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 that those kinds of techniques are the kind of techniques
2 that ought to be considered for such additional protection.

3 As I say, I think that there is either protection
4 for expression, or protection for the innovative concepts
5 behind it; and, whatever you call them, it does not matter.

6 They are still the same. That is, there is one kind of
7 protection, and there is another kind of protection, and you
8 can call them anything you like, but those are the two
9 basic kinds of protection. Whether you have it done
10 by one department, or another department, I don't think
11 really makes a difference. Whether it is done by the
12 Legislative Branch, or the Executive Branch, or by
13 Department A, or Department B, I don't think the
14 administrative structure makes a difference in the kind
15 of protection being offered, if there are two basic kinds
16 of protection.

17 COMMISSIONER HERSEY: But the protection for the fast
18 fourier algorithm would be the kind that copyright would
19 not be able to cover.

20 Is that not right?

21 MR. SALTMAN: Well, okay. I will say "Yes",
22 qualifiedly. I have not examined computer programs
23 which have employed this algorithm, and, therefore, I
24 cannot state with certainty whether somebody else could
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 write essentially a use of the same algorithm in a
2 different expression, having had that algorithm published.

3 I have a strong feeling that someone else could
4 use that algorithm and write an original program that
5 would also be available for copyright. But not having really
6 examined this subject, I really could not say for sure.
7 But I think so. I think someone could use the same
8 algorithm and write an original computer program, someone
9 else having already done so. Therefore, I think the
10 concept of the fast fourier transfer algorithm would not
11 be protectable under copyright. That is, the content of
12 it.

13 COMMISSIONER HERSEY: But you are saying that the concept
14 should be protected?

15 MR. SALTMAN: I am not saying that it should be .
16 I am saying that it is of the quality that conceivably
17 could be-if people wanted it to be. Okay? I don't say
18 that it should be , because that is too high a decision
19 for this project to state.

20 JUDGE FULD: Yes, George?

21 COMMISSIONER CARY: Mr. Saltman, have you by any chance
22 seen the reports of the CONTU Committees on Software and
23 Data Bases?

24 MR. SALTMAN: Yes. Yes.

25 COMMISSIONER CARY: Do you have any comments you would

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 like to make at this time on that?

2 MR. SALTMAN: I think that, from my report, you
3 have noted differences.

4 I think that I have been stronger in noting
5 the difference between source code and object code, and
6 making the point, strongly, that a program in source code
7 discloses something, in my opinion, and that in object
8 code does not disclose enough to be worthy of an "original"
9 copyright, in my opinion. And also, in the data base area,
10 I feel that the concept of publication needs further work.
11 I think it was your addendum to the Data Base Report that
12 made that similar statement, is that not true?

13 COMMISSIONER CARY: Partly, yes.

14 MR. SALTMAN: Those, I think, are the differences.

15 COMMISSIONER LACY: There is a difference in requirement of
16 deposit, too.

17 MR. SALTMAN: Yes. I have made a point
18 of more strongly urging that an actual copy of the data
19 base be made available to the Library of Congress--rather
20 than simply identifying material. on the basis of a
21 concept, again, of quid pro quo, and a concept of transfer
22 maximation when that is possible.

23 Those are, I think, the differences.

24 JUDGE FULD: Any other questions?

25 Thank you very much, Mr. Saltman.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 The Commission welcomes Mr. Vernon Palmour,
2 He appeared before us, last year, to testify on a then-
3 uncompleted study for the National Commission of Library
4 Information Centers dealing with the National Periodical
5 System. That study has now been completed, and the
6 Commission has received copies of the final report.

7 Mr. Palmour appears, today, to summarize the results
8 of his study, prepared at the request of CONTU, of the
9 cost of owning, borrowing,, disposing of journals, by
10 libraries, including relative costs for subscribing to
11 journals as opposed to securing photocopies of journal
12 articles through inter-library loan.

13 STATEMENT OF VERNON E. PALMOUR
14 CONTU CONTRACTOR

15 MR. PALMOUR: Thank you very much. It is a pleasure
16 to be here.

17 The results I am going to talk about today are
18 still somewhat tentative, in the nature that we are finalizing
19 and making a few more runs, and doing some more analyses
20 of the data.

21 I am going to be reporting on the progress of
22 CONTU-sponsored studies; of the cost of owning, borrowing,
23 and disposing of periodical publications.

24 I am a Consultant of the Public Research
25 Institute which has the contract for this study.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 As we all know, user needs for journal materials
2 are satisfied in one or two ways by Library Information
3 Centers. The library either maintains that publication;
4 keeps it in its collection, or, upon the request of a
5 user, borrows it.

6 Both of these approaches cost money.

7 To maintain an item in its own collection, the
8 library has to incur the cost of selecting the item,
9 ordering it, shelving it and, of course, making the
10 publication available upon request.

11 For a requested item that is not in its own
12 collection, then the expenses include the staff time to
13 check the completeness of the information requested by the
14 user; locating a lending library; and filling out the
15 appropriate forms to make the request from that lending
16 library; the postage; and, in most cases, the photocopying
17 charge--because, in a very high percentage of the cases, the
18 request for journal articles are met through photocopying
19 of the article rather than the actual article, itself.

20 The cost to satisfy requests by borrowing the
21 item is, roughly, the same each time. The library has
22 to ask in this way, whereas the average cost per use of a
23 title that is owned by the library, obviously, is a
24 function of how many times it is used, over some period
25 of time.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Consequently, for any given publication, there
2 is some frequency of use at which it becomes cheaper for the
3 library to acquire the publication, rather than to borrow it.
4 in order to satisfy patron demand.

5 A mathematical model was developed by Westadt, Inc.,
6 a consulting firm, in 1968 under a contract with the Center
7 for Research Libraries in Chicago, which compared the cost
8 of owning versus borrowing to satisfy the demand for
9 serial publications. The 1968 model used average cost data
10 drawn from a survey of four university libraries.

11 It was found, at that time, using these average
12 costs in 1967, I believe, that if a serial title with an
13 annual subscription rate of \$20.00 -- which was the average
14 subscription rate at that time-- if such a title was used
15 less than about six times per year, it was less expensive
16 for the library to acquire photocopies when needed, rather
17 than to maintain its own subscription.

18 COMMISSIONER LACY: Mr. Palmour --

19 MR. PALMOUR: Yes.

20 COMMISSIONER LACY: May I inquire if there has
21 been an inversion in the text we have. It says more than
22 six times a year.

23 MR. PALMOUR: Yes. I did not realize that they
24 were going to send out the draft report. There are numerous
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 errors in that.

2 With the current attention that periodicals
3 are receiving, due to the reduced library budgets, rapidly
4 increasing cost of periodicals, the new Copyright Law,
5 and the proposed National Periodical System, CONTU
6 decided to, or desired to, investigate the economy of
7 owning, versus borrowing, periodicals using this 1968 model
8 with updated cost inputs.

9 The contract was given to the Public Research
10 Institute to conduct the study. I might add that this was
11 primarily because two of us who were authors of the study
12 in 1968 had some relationship with the Public Research
13 Institute at this time.

14 The primary purpose of this study was to investi-
15 gate the frequency of use at which it becomes cheaper
16 for a library to own a periodical rather than borrowing
17 the item when it is needed.

18 I will describe, briefly, the model, without
19 going into any real detail of the mathematics.

20 As I said, the purpose of the model is to
21 calculate how libraries' costs vary, depending on how it
22 goes about meeting demands for periodical publications.
23 Using the model library and determining when the frequency
24 use for a given title becomes cheaper to own,
25 rather than borrow. Depending on the anticipated level

1 of use for a particular title, the library is faced with
2 a number/^{of}alternative choices regarding the subscription
3 of periodicals.

4 For current subscriptions it can:

5 (1) Continue/^{the}subscription; bind, catalogue,
6 and shelve the item.

7 (2) It can continue the subscription, but
8 dispose of volumes or issues over a specified cut-off age.

9 (3) It can discontinue current subscriptions
10 and dispose of all back files, which implies borrowing for
11 all future requests.

12 (4) The fourth option for current subscriptions
13 is that they can discontinue current subscriptions, but
14 continue to house all of the back files of a specified age.

15 These are just examples of options. There are
16 numerous combinations.

17 For periodical titles not presently owned, the
18 library can subscribe, bind, catalogue and shelve, or
19 the library might decide to subscribe and dispose of issues
20 over a specified cut-off age; or another option is that
21 for all of the requests received for a particular title
22 not presently owned, they can request these from other
23 libraries by borrowing.

24 Now, by comparing the costs of the following
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 alternative policies, one can determine which policy is
2 least costly to the library.

3 Costs are calculated over a specified planning
4 period -- nothing more than a number of years that the
5 costs are accumulated over. For each policy, the various
6 costs incurred in each year of the planning period are
7 discounted to the present value, and then summed over all
8 years.

9 Now, briefly to go through the cost inputs that
10 the model requires and describe them briefly:

11 First is what we have labeled the initial cost.
12 This is a one-time cost of ordering a new title. It
13 includes the cost of ordering and cataloguing^{the}/title.

14 Secondly, there is an annual recurring cost.
15 This includes the subscription, the selection and review
16 of titles, check-in, claiming, shelving, separation of
17 serials list, binding, preparation, training, direct super-
18 vision, and bindery costs.

19 These annual recurring costs are independent
20 of the number of years of back files, or the annual demand
21 placed upon this title.

22 The third cost is storage cost.

23 We used storage cost only in the case where
24 storage space is critical. In other words, if the library
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 has adequate space, we are assuming the building is assuming
2 cost, and we are not putting in storage cost.

3 In those places where space is critical for a
4 library, obviously, the storage cost depends upon the
5 number of volumes in the back file.

6 The fourth cost is disposition, or "weeding"
7 costs. This is the cost of removing from the shelves and
8 discarding. It includes the cost of changing records,
9 also. And, of course, this cost depends upon the number
10 of volumes that are being removed from the shelves.

11 Again, we did not look at the case of weeding
12 unless there is a space problem, which implies, then, that
13 when weeding costs come into play in the model, there is
14 storage cost as well.

15 The fifth cost is that of internal-use costs.
16 This includes the cost of circulation; re-shelving and
17 shelf maintenance. This cost depends on the number of
18 volumes in the back files and on the annual demand.

19 The sixth cost is that of borrowing. This
20 includes the personal services to prepare the requests,
21 postage, and the inter-library loan fee from the lending
22 library when such a fee is charged. And, of course, this
23 depends upon the volume of demand.

24 Now, I should comment that the way we have
25 constructed the cost data in this project is slightly

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

REC-416 (202) 347-0224

1 different from the way we analyzed it in 1968. In this
2 approach, we have only considered what we might call the
3 "relevant cost", the relevant cost being those costs that
4 come into play in the decision of loaning versus borrowing.
5 In other words, if both policies would have a common cost,
6 that would be incurred independent of which policy you use,
7 we have not worried about including those in the model, because
8 they are not important to a decision.

9 Now that means that the cumulated cost over the
10 planning period is not the actual expected cost of owning
11 this title. As far as the model is concerned, that is no
12 problem.

13 The other point with regard to the kind of model
14 it is, typically, a present-volume model talks about the
15 "residual" value; or the salvage value at the end of the
16 planning period. Using a planning period of 25 years --
17 which we have done -- we assume that was of sufficient
18 length that we have essentially ignored the residual
19 value. There is some question as to this, but one of the
20 problems is trying to compute what the residual value of a
21 selection is at the end of a planning period.

22 In the earlier study, we had such a calculation,
23 but we were not sure that it was really that useful, and
24 it did not impact upon the decision.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD MAKING PROFESSIONALS

PAGE (202) 347-0224

1 Now, for certain options, some of the above cost
2 components that I have just gone through are, clearly, zero.
3 For example, if the subscription is terminated, then the
4 subscription cost is zero. If no volumes of a periodical
5 are weeded or discarded, that cost is zero. If a new
6 periodical title is not subscribed to, and all requests are
7 met by borrowing, then the borrowing costs are the only
8 ones that are relevant.

9 Inclusion of the cost components with their
10 appropriate values make it possible to compare the cost
11 of the range of alternative policies with a single computer
12 model.

13 Besides costs, the other set of inputs required
14 by the model are what I might call "demand" characteristics

15 Essentially, we need two attributes of demand:

16 We need to input the actual values of demand.

17 By demand, I mean the number of uses per year.

18 We also need to describe the shape of this
19 demand over time.

20 As I am sure you are quite familiar, with
21 periodical titles, the use decays as a function of time;
22 and so the model has to have some way of describing this.

23 In 1968, the model had built into it only
24 the capability of assuming a geometric distribution, as
25 far as the distribution of use as a function of age.

1 That was found to be a limitation, and I will mention
2 that a little later.

3 The model now has been changed to where one can
4 put in any empirical distribution that he or she likes
5 to describe the decay of use as the function of age.

6 Now, the range of average annual demands
7 per title is actually input into the model. In other
8 words, we specify the demand level and, for a given
9 demand level, the model goes through and looks at the
10 cost and then we, in the end, can analyze these for the
11 minimum cost at various levels of demand.

12 Now, the regression is necessary to explain what
13 is meant by "average annual demand". When you are
14 working with periodical titles, I think that you would find
15 that a demand of ten per year for a new title, with only
16 one year of back file, is not equivalent to the annual demand
17 of ten for an old title of, say, 30 years of back files.
18 In other words, a new title has already generated ten
19 annual uses when it has only been in existence for one
20 year, versus an older title where the entire title, with
21 the back files, is only receiving a demand of ten per
22 year, certainly the newer title has greater potential.
23 so in the model, in order to keep these straight, we
24 normalized the demand. We normalized it to the 10-year
25 title. That means the demand has been normalized to what

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHOTOCOPY (202) 347-0224

1 would be expected of the periodical title in its 11th
2 year. Thus, implying the model to a specified title of
3 a particular age, one has to take into account the need
4 to adjust the estimated demand for this normalization
5 factor; and the table is provided that allows one to do
6 this.

7 I will just go through some of the results
8 briefly.

9 In order to update the model in terms of cost,
10 we obtained permission from three libraries to actually
11 come in and work with them and try to estimate the cost of
12 handling periodicals.

13 That included two university libraries, and one
14 large technical library.

15 I don't think I need to point out the difficulties
16 in determining cost in a library operation. I won't go
17 into any of the details, but it is a difficult task because
18 they have not, typically, established cost accounting systems
19 to keep up with these kinds of costs; and so the costs
20 that we have here are very rough estimates.

21 But, looking at the four costs that we were
22 able to estimate from these libraries, for the
23 initial cost -- that is the cost that the library incurs
24 in making the decision to subscribe to a new title in the
25 first year -- we had costs of \$12.00 per title added; and

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 \$71.00 per title added; and \$54.00 per title added, So you
2 can see the variation there.

3 Now, the library with the low costs is a much
4 smaller library, and there is reason to expect that the
5 costs should be lower. It is not clear that there should
6 be as much variation as we observed, here, but the same
7 techniques were used in the three.

8 As far as annual recurring costs -- and this is
9 the cost per current title -- it ranged from \$9.00 to \$26.00

10 The internal use cost -- this is based on the
11 per-item use -- ranged from 40 cents to 60 cents. That
12 was reasonably constant.

13 Borrowing costs -- and this is the internal
14 borrowing cost; in other words, primarily the staff cost
15 involved in the library making the request. It does not include
16 the Inter-library loan cost at the other end. This is
17 based on per-item borrowed, and this ranged from \$5.00 to
18 \$9.00. Those figures are not outlined with similar
19 figures from other studies. We are looking just at
20 Inter-library loans. In fact, they may be low, if anything

21 Now, other costs that we could not obtain from
22 these three libraries where we had to use data from other
23 studies included storage costs and weeding costs. The
24 storage cost, as I mentioned, was assumed to be zero --
25 where the space was not critical. In the case

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 where space was considered critical, 50 cents per annual
2 volume was used for storage cost. This is based on a
3 very rough calculation of the replacement cost of the
4 building. This is 50 cents per annual volume, and "annual
5 volume" means, essentially, the combined issues that come
6 out in one year. That may or may not be for the
7 bibliographic volume.

8 Weeding costs of 65 cents per annual volume
9 was assumed, and this is a very rough figure based on a
10 couple of other studies; essentially the staff cost of
11 pulling the item off the shelf; discarding it; and then
12 making all of the necessary changes in the record.

13 Now, a discount rate of 6% has been used, and
14 an inflation rate of 4%. Perhaps I should comment that
15 this discount rate is nothing more than just taking in
16 account that dollars today are worth more than dollars
17 in the future. An example is that 90 cents today
18 is worth a dollar a year from now. That implies a 10%
19 discount rate, and there are a lot of arguments on how
20 you choose the appropriate discount rate. I suppose we
21 could say that we arbitrarily chose 6%, and would not quibble
22 if someone wanted to change that to 8%, or whatever.

23 But a discount rate of 6% and an inflation rate
24 of 4% seemed reasonable.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

1 Now, demand data: I mentioned earlier that
2 as we started this investigation, we realized that the
3 model, as it had been developed in '68, had certain
4 limitations on the built-in treatment of demand, and
5 that primarily stemmed from the fact that, in '68, we only
6 had data from about four large lending libraries, that
7 gave us the distribution of use of individual titles
8 as a function of age. These were large lending libraries.
9 That included the National Library of Medicine which, at
10 that time, was the National Library for Science and
11 Technology.

12
13 Based on that data from the lending libraries,
14 decay rate as a function of time was clearly geometric.

15 When one starts looking at an individual
16 library that is primarily making use of internal materials,
17 you find the decay rate is, generally, much more rapid than
18 in these large lending libraries. That can be accounted
19 for, I think, to a large degree, on the fact that much
20 of the use that is made^{is made} in the early years with reference
21 and a lot of browsing takes place as new titles
22 are put on the shelf, and so internal use tends to be
23 much heavier in the earlier years than, say, the inter-
24 library loan use of these large lending libraries.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 In order to check that hypothesis out, I requested
2 the data from the British Library Lending Division, knowing
3 that they had accumulated data in 1976 on some 63,000 inter-
4 library loan requests; and they had recorded this as a
5 function of age for a particular title. So I obtained
6 that data, and they already had the data in terms of broad
7 subject areas.

8 Another hypothesis that we had -- which is well
9 known in the library field -- was that, as to Science and
10 Technology, it is expected that the use is much heavier
11 in the early years than for the Humanities. The B.L.L.D.
12 had the data in the areas of Science and Technology,
13 the Humanities, and Social Science.

14 Upon analyzing that, it did turn out as we expected:
15 Science and Technology ^{basic} taped off much quicker;
16 Social Science was reasonably close; but the Humanities
17 decayed at a much lower rate. In none of the three was
18 the geometric decay perfect. The geometric decay was
19 reasonable.

20 In looking at the data that has recently become
21 available from the Pittsburgh study -- this was tentative
22 data that they published in a progress report, but it is for
23 a single library; and it is based upon internal use -- the
24 distribution is much different, and so what we have done at
25 this point; we have taken the demand data from the University

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 of Pittsburgh -- one of the three libraries that reflected
2 cost data and they had, in fact, previously collected-over
3 a period of one year,--demand data. And so we have taken
4 these two demand distributions. The Pittsburgh demand data
5 that we have used essentially characterizes Science and
6 Technology collections. The other university that we have
7 the demand data from essentially is described/^{as}what I would
8 call a general Liberal Arts Library; heavy in the
9 Humanities and Social Sciences and not much in Science and
10 Technology.

11 So, taking these two demand distributions and
12 the cost data that I have summarized, we have made numerous
13 runs, and I am just going to review, very quickly, a few of
14 the more interesting points today, because I am at a
15 disadvantage by not having, essentially, some charts to
16 show these.

17 The first decision that we looked at was that of
18 whether a library should subscribe to a new title; or whether
19 it should request material from another library for a library
20 loan, in order to meet patron demand.

21 And the contrast -- what I would define as the
22 cross-over point -- which is nothing more than the point
23 at which borrowing costs equal owning costs -- I have that
24 cross-over point here in terms of two sets of costs: the
25 small library that tended to have low costs; and one of the

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 other libraries which had higher internal costs, and, of course
2 this is a function -- the cross-over point is a function
3 of the subscription rate price -- the annual subscription
4 price. For a free subscription -- which a few libraries
5 have -- they do receive some free subscriptions, so that
6 was one of the cases we looked at. For a free subscription,
7 the model would tell you that if you had three or less
8 annual demands, in your small library, with these low costs,
9 you would be better off to borrow it. In other words, if you
10 had greater than three in a year, you should purchase it.

11 That is, still, rather surprising. Three for a year
12 is not very many.

13 If that subscription price goes up to \$80.00;
14 for a small library, it would tell you that you need twenty-
15 five, or more, before you ought to own it.

16 If the subscription price goes up -- as you would
17 expect -- then the cross-over point moves out. In other
18 words, you need more annual requests to justify buying it.

19 Comparing those costs with the university library
20 which had a higher set of internal costs; for the zero
21 subscription price, the cross-over point is essentially
22 the same -- still around three. As you move up on the
23 subscription price to, say, \$80.00, rather than the cross-
24 over point being at twenty-five, -- annual usage for the small
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 library-- it is now fourteen for the higher cost, larger
2 library.

3 COMMISSIONER DIX: What was the assumed cost of getting
4 the photocopy on these two examples?

5 MR. PALMOUR: I should have mentioned that.

6 In the two cases I just adverted to, we used the
7 actual figure that the individual libraries felt most
8 represented their own situation; but the small library has
9 an annual cost of \$1.25 for inter-library loan. They
10 participate in the network.

11 COMMISSIONER DIX: That is what they had to pay?

12 MR. PALMOUR: That is right.

13 COMMISSIONER DIX: Including postage?

14 MR. PALMOUR: Yes. Rather modest.

15 The larger university library felt
16 that \$3.00 for an inter-library loan was more appropriate
17 for them. So those cross-over points that I mentioned cleared
18 those.

19 Now that, essentially, looks at the decision on
20 whether to subscribe to a new title, that is not currently
21 owned.

22 Probably a more frequent decision, today--at least
23 in the smaller and moderately sized university libraries
24 -- and I am sure this is true in the special libraries, as
25

1 well, is a decision on whether to maintain or terminate a
2 current subscription.

3 I mentioned earlier that we had normalized demand.
4 In order to keep this simple, as far as looking at the results,
5 this is the same: We are talking about maintaining or
6 terminating a 10-year old title--which means that we don't
7 have to annualize the normal demand. The decision is whether
8 they should maintain the subscription; or whether the library
9 should terminate it, but keep the back files, which means
10 that with ten years of back files, they would meet some of
11 the demand, but would have to borrow for all future issues.

12 Now, again, I have here for the example today,
13 the library with the low internal cost; and the other one
14 with higher costs.

15 Again, with a free subscription, the cross-over
16 point is about two for each of the libraries. When the
17 subscription rate goes up -- perhaps I should mention the
18 \$40.00 subscription rate, since that is more typical of the
19 average. The \$40.00 subscription rate: the cross-over
20 point for the low cost library would be around nine uses
21 per year; for the library with higher costs, it is about six
22 uses per year. As the subscription rate moves up to \$80.00,
23 then the cross-over point for the low cost library is
24 about seventeen, and for the high cost library it is still
25 only nine.

1 What does all of this mean?

2 Well, with regard to the average subscription
3 price of a periodical title today -- which is somewhere
4 between \$30 and \$40, depending on whose figures you use --
5 it varies, of course, for an individual library -- the
6 cross-over points have not changed that much from the six
7 that were found back in 1968. In other words, somewhere
8 between "five" and "ten" annual demand, seemed to be the point
9 where owning versus borrowing would change if the library
10 manager is looking strictly at these cost components of
11 his or her operation.

12 In terms of the CONTU guidelines, it has been
13 suggested -- as you are well aware -- that six or more
14 requests for a title in the last five years ought not to be
15 considered out-of-line. I am paraphrasing that, roughly.
16 That certainly is in line with the cross-over points found
17 here in the model, -- looking at the economics of owning versus
18 borrowing.

19 The question as to the variation in these cross-
20 over points, of course, is not the actual magnitude of the
21 cost. If we just took the '68 costs and inflated them,
22 in the case of the high-cost university, it turned out that
23 we come reasonably close to the cost we found in the large
24 university here, this year, by just taking the CPI Index
25 and inflating it.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 The key difference in the cross-over point comes
2 about with regard to the relationship between the costs
3 incurred internally, versus the borrowing cost that the library
4 has. So, if the library has very low internal handling costs,
5 and very high borrowing costs, then you get a big difference!
6 It turns out that the reason the '68 cross-over point of
7 six is very close to the cross-over point for the '77 case,
8 where we make the same assumption, is that the relationship
9 between the costs has not changed. The borrowing costs
10 and the internal handling costs have gone up about the same,
11 so it is not surprising.

12 Now, I don't want to dwell on weeding.

13 In the early report in '68, we did not spend
14 much time, at all, looking at policies on weeding. There had
15 been a lot of discussion in the library community about the
16 anticipated need for a weeding policy, primarily due to the
17 critical space problems that many libraries are now facing;
18 and the little hope for new buildings.

19 But in the preliminary investigation of policies
20 for weeding, I would just say that the preliminary results
21 indicate that a library is better off to terminate, and
22 discard all back files, if the actual use falls anywhere
23 near the cross-over point. And if space is not, I will say,
24 highly critical, then the optimal weeding age appears to be
25 around 20 years.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 This is a rather surprising finding. That is the
2 reason I have labeled this "very tentative", because
3 most of the discussion is generally in terms of the three
4 to five year cut-off ages, which would allow you to house
5 the issues without binding them, and then once they reach
6 three or five years of age, you just throw them away.

7 But it appears that the optimal weeding ages
8 would be quite a bit higher than that!

9 Now, in closing, I would like to just mention a
10 couple of limitations on the model.

11 First of all, it seems that borrowing and owning
12 -- as the two alternative policies are being compared --
13 are of equal effectiveness because our models essentially
14 want to minimize the cost. As you know, if you are going
15 to minimize cost, you need to be, essentially, working at
16 the same level of effectiveness or performance; or else you
17 are comparing apples with oranges.

18 Some might question whether borrowing has the same
19 effectiveness as owning, and there is some legitimate concern
20 that the current awareness activities -- the browsing
21 activities that go on in the library -- clearly have a value.
22 We are not capable of quantifying what these values are --
23 in order to incorporate them into the model.

24 Another serious limitation that was pointed out
25 in the earlier work in '68 and is inherent in this, as well,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 is that we have no way of assigning a value in terms of
2 cost to the user's time. He must wait, in the case of borrowin
3 and with the present library-loan system, it sometimes
4 comes in after one or two weeks, and, clearly, the user's
5 time has some value. But this model does not account for it.

6 So one has to be well aware of these assumptions
7 that go into this rather mechanical model before he can take
8 these results and immediately apply them, without giving
9 some real meaning to these cross-over points.

10 I personally think that, based on my own
11 personal experience and those of the library community, that
12 most libraries of every size, having seen the model, perhaps
13 can be convinced that there is some reasonable cut-off
14 point. And I think that most of them have an adequate
15 number of titles which, essentially, receive no demand in a
16 year; so it is not a matter of deciding whether it should
17 be three, ten, or twelve--but a reasonable amount of
18 weeding can be done without being all that concerned about
19 exactly what the annual demand is. It would give you this
20 equal cost between borrowing and lending.

21 Well, I appreciate this opportunity. I will try
22 to answer any questions that you might have.

23 JUDGE FULD: Thank you very much, sir.

24 Mr. Lacy.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER LACY: Mr. Palmour, we spoke on the telephone
2 the other day about a point that I would like to pursue.

3 It struck me that your study was a very valuable
4 one for a Librarian who is trying to make a decision about
5 the relative economies within his institution.

6 Our concern, of course, is with the total social
7 cost involved -- not merely the cost of a particular
8 institution -- and with devising copyright recommendations
9 that would provide an incentive to all those concerned to
10 behave in a social and most efficient and useful way.

11 Now, one of the factors that has been fed into
12 your equation is the subscription cost of the journal
13 -- and quite accurately so, from the point of view of the
14 library because the library ceases to subscribe or refrains
15 from subscribing to a journal with a \$30.00 subscription
16 cost, to save \$30.00.

17 However, all society is saving is the overrun
18 cost of printing one more copy of the journal and mailing
19 it, and doing the bookkeeping on these subscriptions.
20 Nothing else is really of any saving. The cost of that, one
21 could guess, is more like \$4.00 or \$5.00 a year. That is,
22 the library that pursues the borrowing cost, and has made
23 no contribution, in effect, to the cost of authorship,
24 or editorial cost, the selection, the putting
25 into type and the copy editing, and all of the other indexing,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PAGE 1E (202) 347-0224

1 feeding into the bibliographical systems and all of the
2 other costs involved in publishing a journal. These are
3 real costs. They are not imaginary costs; but must be met.

4 This means that, say, the journal that is involved
5 which has, perhaps, received \$4.00 in costs, and has lost
6 \$30.00 in revenue, makes that \$26.00 up from other sources --
7 from a Federal subsidy, from a subsidy from the society or the
8 university that publishes it, out of its profits, which,
9 of course, come from the subscription rates,--otherwise they
10 would discontinue publication. The social cost, say, is
11 much less when preferring to subscribe, than under the
12 other calculation.

13 On the other hand, I suspect that the costs,
14 relying on copying, are understated. They estimated \$1.25
15 to \$3.00. I think it is highly likely that this means
16 that the institution that provides the copy is subsidized
17 in making the copy. I cannot perceive that even \$3.00
18 reimburses a university library for the clerical work of
19 receiving an order, digging the book out of the shelves,
20 doing the photocopying, replacing it, mailing it, billing
21 and collecting.

22 The International Periodical System estimated the cost
23 -- as I recall it -- to be \$10 to \$12 for a central second tier
24 service that the Library of Congress might administer. That
25 is certainly higher than the average cost, because you are

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 dealing with a large volume, and less frequently used
2 material. It is probably nearer the true cost, so if you
3 upped the cost of each photocopy from \$1.25-to-\$3.00 to
4 something like \$6.00 or \$7.00, and lower the cost of savings
5 from non-subscribing from \$30.00 to -- make it -- \$5.00,
6 you would get, of course, a radically different set of
7 equations.

8 Moreover, you mentioned two not-readily-measurable
9 costs in relying on copying. One is the time. As you
10 mentioned, that affects the user and his convenience,
11 and the efficiency of his research.

12 The other: You also mentioned that this calcula-
13 tion assumes that the only uses that would be made of
14 the printed copy in the library are those uses of a
15 character that would relieve the user of undergoing the
16 expense of all of the photocopying. That is, it will miss
17 the fact that there will be not only browsing use, time and
18 awareness use, but, also more marginal uses of actually
19 reading the articles if they were at hand.

20 So it seems to me that the three major ways the
21 social costs -- and I can measure this quite accurately,
22 from what you said, I can measure the library costs, but if
23 you are talking about social costs, you radically reduce that
24 cross-over point. You reduce it very substantially, and I
25 think it is fairly clear that the social cost of shifting

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 from print to copy is far greater and the shift to
2 social advantages and economies to the society as a whole
3 is far less than most of the literature based on a calculation
4 of savings to the library, alone, would suggest.

5 This means, I think, in effect, that a copyright
6 regime that allows the library to acquire photocopies
7 without making any contribution to cost -- that is, making
8 it as if they owned it, without making any contribution for
9 the photocopy to the cost of editing, selection, copying,
10 referring -- all of that sort of thing -- all adds to the
11 incentive of the library to behave in an uneconomic and
12 socially undesirable and inefficient way. It increases
13 the social cost of communication. It is a highly dis-
14 incentive measure, -- so far as the economy as a whole goes;
15 and I wonder if it has been possible to give any thought
16 how one might measure the structure of social costs.

17 MR. PALMOUR: I have given that a little thought,
18 but I have not concluded much.

19 The points you raised are exactly right. This
20 model was geared to looking at the cross-over points for a
21 single library. The model setup is such that the subscription
22 price is essentially treated as being external, or independent
23 of the decision made.

24 Clearly, if all libraries adopted this model and
25 went out and put it into effect; and all adopted the cross-

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PAGE (202) 347-0224

1 over point that was suggested here, I suspect that publishers
2 would have to raise their prices. There would no longer be
3 the assumption that the subscription price is external.
4 That would be invalid. And so it is looking strictly at
5 the optimization -- I use that word loosely -- of a single
6 library manager.

7 You mentioned the fact that if you are going to
8 look at the cost to society, you need to include all of the
9 real costs. You mentioned the inter-library loan. I
10 would guess that true inter-library loan costs for the
11 lending library which, in my two examples--I assumed in
12 one case that it was \$1.25; and in the other case it was
13 \$2.25; and in other cases, \$3.00 -- it is more likely
14 to be between ten and fifteen (dollars), in most cases --
15 at least in the large academic libraries that are doing
16 a substantial amount of lending today.

17 So, clearly, applying this model and thinking in
18 terms of society as a whole, it would be misleading, and
19 you are correct in that. If you did want to try to take
20 into account the cost to society, the cross over point
21 would be lower. I have not been able to, actually, come
22 up with any way of calculating exactly what that would be,
23 because, as you are well aware, there is a whole host of
24 social costs which we don't know how to compute.

25 From an economic point of view, I suppose that,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 theoretically, it is possible to talk in terms of these costs
2 to society. From a practical point of view, I am not sure
3 that one could compute them. But you are correct! The cross-
4 over point, when looking at these decisions from the
5 point of view of society at large, would move down much
6 lower.

7 You mentioned that, perhaps, one place that comes
8 closest would be for high inter-library loan borrowing
9 costs; and in the draft, we did have some figures based on
10 \$8.00. That is probably still low for the real cost of
11 an inter-library loan but, based on the computations we have
12 in hand today--assuming the library loan cost of \$8.00,
13 and assuming a free subscription -- which is closer to the
14 marginal cost of what it takes a publisher to produce one
15 additional copy -- then looking at that case -- assuming
16 the same model, which is still somewhat questionable --
17 that cross-over point does move down much lower than the
18 optimal cross-over point for a single library.

19 I think that, in the model, as it stands, just the
20 fact that we have used the real inter-library loan cost --
21 that is something we understand. We know what that is.

22 Perhaps, in the final report, we will put in a
23 section to, at least, comment on these costs to society, --
24 pointing out the potential effects if all libraries immediately
25 applied this.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHOTO (202) 347-0224

1 I don't have any concern that all libraries will,
2 but there would be some consequential effects.

3 COMMISSIONER LACY: Perhaps one of the ways of introducing
4 some more realistic figure, you know, would be to take a
5 look at costs, relying on private enterprise sources to
6 provide copies which, on the one hand, through paying royalties
7 do make a contribution -- although I expect too small a one
8 to the first costs of publishing the journal, --
9 and which do charge a fee which represents the true cost of
10 providing the copy, so they don't go broke.

11 On the other hand, it should be recognized that the
12 available private services cover only a few thousand titles,
13 and those few thousand most in demand are the least
14 expensive to supply. So, if you pushed the private service
15 up to, say, the 40,000 title range, that is spoken of as
16 "the second tier" in library service circles, that cost
17 would certainly be substantially higher.

18 JUDGE FULD: Any other questions?

19 Mr. Frase?

20 MR. FRASE: I understand that when we get the final
21 report, we will also have a computer tape program which we can
22 make available through the N.T.I.S. as a printed report,
23 and libraries would then be able to purchase the program
24 and input into it their individual costs, with all of these
25 variations, on an individual title basis.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 MR. PALMOUR: That is correct, although

2

3 the libraries need a lot of cost data which most of them
4 don't have, in order to actually apply it to their own
5 specific case.

6

7 MR. FRASE: But the report would include instructions
8 as to how to go about getting this cost data, as was done
9 by your three test libraries?

9

MR. PALMOUR: That is correct.

10

MR. FRASE: One other question, and that is:

11

12 What did these three test libraries use; and, in
13 general, what do libraries use, in the program for the
14 demand data?

14

15 Would it be their internal data on what is loaned --
16 their loan records for a title? Or are libraries in a position
17 to measure both the loaning -- the use measured by loaning
18 but, also, the internal library use, such as browsing.
19 taking it off the shelf, putting it back and so forth?

19

20 MR. PALMOUR: Very few libraries have measured
21 the actual internal use, because it is not an easy task.
22 It requires having someone stand around and watch as
23 individuals come, and go, and leave things on the table.
24 You really have to count the items left on the table.

24

25 In order to record "browsing", that is even more
difficult. Consequently, very few libraries have internal

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 use data, but I certainly think that, because of the
2 difficulties that the libraries are now facing with budgets
3 and, particularly, in the area of periodicals, more and more
4 are going to be recording this data. I know several that have
5 started, now, and this is because they have to justify their
6 own budgets; and the questions that are being asked about
7 the actual use in the libraries. But I think, for the
8 purposes of using this model, a library would not be far off
9 if they used the demand data that we have from the two
10 libraries now.

11 This demand data, while it is very important
12 with regard to the weeding end of the decision, does not
13 affect the cross-over point that much. In other words,
14 the decay rate, at which the use of a particular issue falls
15 off as a function of age, does not affect the cross-over
16 point that much.

17 In other words, any reasonable distribution of
18 demand would work sufficiently well, I think.

19 MR. FRASE: Did these three libraries have an
20 efficient method of measuring internal use?

21 MR. PALMOUR: I would not call it really "efficient",
22 no, because it was the first time they tried it.

23 Now, as they continue -- well, one is Pittsburgh,
24 and I know very little other than what I talked to Professor
25 Kent and his colleagues about -- the internal operations there,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 at Pittsburgh -- but from the other one that I am familiar
2 with; they have been collecting internal use data for about
3 one year. They closed the periodical stacks in order to
4 better monitor the use of periodicals, and, as more and more
5 libraries close the stacks, the better opportunity they will
6 have to record circulation.

7 COMMISSIONER DIX: But distorting the use, at the same
8 time?

9 MR. PALMOUR: That is right. There is an
10 interaction there.

11 MR. FRASE: So, in using the model, the library
12 would have to be very careful about trying, really, to
13 measure internal use.

14 MR. PALMOUR: Well, no. What I am saying is that,
15 I think as long as a reasonable distribution of use is input
16 into the model, the individual library doesn't have to be
17 that much concerned. In other words, the use at a Physics
18 library at M.I.T., or Princeton, or a smaller university, --
19 I think the decay rate of the individual issues, or the
20 use of individual issues, over time would not vary that
21 much among these different Physics libraries. So, as long
22 as the Physics library had the general shape of the demand
23 as a function of time for Physics, it would not matter
24 whether it was their own data, or not.

25 MR. FRASE: Doesn't it exclude the level of use, as

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

ARCHE (202) 347-0224

FS

1 well as the decay?

2 MR. PALMOUR: They have no absolute level, but
3 that is separate from distribution. In the model. you
4 see the absolute level, if you want to look at it.

5 MR. FRASE: But what I am saying is that if the
6 absolute level is underestimated, then the model does not
7 give you a right answer.

8 MR. PALMOUR: That is right. They have to have
9 a reasonable handle on the actual use, or else the model
10 is of little value.

11 COMMISSIONER WILCOX: I have kind of a comment, and then
12 a question.

13 One is: Would it be correct that the total cost
14 of the serial would not just be the cost of a subscription
15 but the cost of the ordering, and the storage, so that
16 the cost of the subscription would be about a third of the
17 total cost to the library?

18 MR. PALMOUR: A third? I am not sure that I have
19 that, readily, at hand.

20 COMMISSIONER WILCOX: I think some place in there, it indicates
21 that it is about \$70.00. The average cost is about \$20.00.
22 A previous study indicated -- the Stanford study --
23 that the cost ran about three-to-one in the cost of the
24 subscription price as opposed to the cost to the library.

25 MR. PALMOUR: Yes.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER WILCOX: That is much more related than just
2 saying that there is more cost to the library than the cost
3 of the subscription that is saved.

4 MR. PALMOUR: Oh, clearly.

5 COMMISSIONER WILCOX: The second point would be: In the
6 Pittsburgh study, there seemed to be an indication that, if
7 anybody in the library were going to use this model, that
8 it would be clear as to which titles were never used and
9 they would seldom ever have to go into selecting the titles
10 that might come close to a cross-over.

11 MR. PALMOUR: That is right. As I say, I think
12 most libraries would weed titles that, for the most part,
13 are getting one or less use -- many of them getting zero
14 use -- in a year. There is a question: One has to not jump
15 to a conclusion that annual demand is the only variable of
16 interest. You can ask a question: Why consider the
17 number of uses in one year? Why not two years, or three
18 years? So all of these stock-controlled models -- if
19 you want to call them that -- tend to talk in terms of
20 annual estimates.

21 COMMISSIONER WILCOX: Well, this would get to my comment.

22 That is that I don't think any library knowingly,
23 or willingly, decreases its amount of subscriptions. It
24 does it under these pressures that we talked about this
25 morning with Professor Baumol. So I don't think that is

1 going to have to be due to irresponsible management.

2 MR. PALMOUR: No, But I would say the pressure
3 is sufficiently great that many of them are reducing their
4 periodical budgets, now.

5 COMMISSIONER WILCOX: But maybe they are doing that to
6 maintain their book collection.

7 MR. PALMOUR: That is right.

8 You are right. In the last three or four years,
9 book budgets have been reduced, in some cases, to rather
10 alarming rates, in order to keep the periodical subscriptions
11 going. Many libraries can no longer do that, so the
12 periodicals are coming under scrutiny.

13 JUDGE FULD: Any other questions?

14 (No response)

15 JUDGE FULD: There being none, thank you.

16 Our final speaker for this afternoon is Dr.
17 Bernard Fry. He is a Dean of the Graduate School of
18 Library Science of Indiana University Dr. Fry previously
19 has appeared before this Commission with a report on a study
20 prepared under a National Science Foundation grant on
21 Economics and the direction of the publisher/library
22 relationship in the production and use of scholarly and
23 research journals.

24 Today, he will report to us on the results of
25 the CONTU-funded survey of publisher practices and present

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 attitudes on the authorized copying and licensing of
2 journal articles.

3 Welcome Dr. Fry.

4 STATEMENT OF DR. BERNARD FRY
5 DEAN, GRADUATE SCHOOL OF LIBRARY SCIENCE
6 INDIANA UNIVERSITY

7 DR. FRY: Thank you, Mr. Chairman.

8 By way of preface, I should tell you that our study
9 has just been completed about a week ago.

10 JUDGE FULD: We have it before us, yes.

11 DR. FRY: I am not sure how many of you have
12 copies. Those copies do not, yet, have an index, or a
13 satisfactory table of contents, I believe. But that will
14 be remedied in the next week, hopefully.

15 Our task for conducting the study was two-fold:

16 (1) To determine publishers' practices at the
17 present time, in providing copies of journal articles; and

18 (2) To solicit publishers' attitudes towards
19 alternative ways of supplying, or licensing, copies.

20 The report which some of you have runs to over
21 200 pages, and about 60 tables, and I will not try to encompass
22 the whole report this afternoon, especially since the
23 afternoon is getting on. But I would like to identify some of
24 the highlights of our study, of the finding, and, of course,
25 answer any questions that may occur.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHO:JE (202) 347-0224

1 I think the context in which the study was done
2 should be understood at the beginning.

3 The study was undertaken on the basis of two
4 questionnaires, prepared by CONTU, and with our interaction
5 and, also, with a pre-testing among publishers. These
6 were circulated during the month of March -- of course, well
7 after the passage of the new Copyright Law, but prior to
8 much of the publicity and, certainly, the promulgation
9 of the A.A.P. Copyright Payment Center, and discussion
10 of clearing houses and their functions.

11 So that some of the reactions from the survey, I think
12 reflect a lack of information, and a serious need for
13 education of many publishers -- especially the ones --
14 journal publishers, the numerous ones whom we contacted --
15 about the functions of the clearing house; about the functions
16 of the provisions of the Copyright Law, itself.

17 I think, in general, this was the major finding
18 of our survey.

19 We based the survey on a list in excess of
20 2,500 technical, scientific, and scholarly and research
21 journals, however defined, which was used earlier in a
22 study for the National Science Foundation, and was
23 amended for the purposes of this study by an examination
24 of births and deaths in the journals field.

25 This list we have found reasonably reliable as

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 a representative list of scholarly and research journals;
2 and I will be glad to give you breakdowns of the survey
3 population in several different ways, if you wish.

4 One of the points that came out clearly, I think,
5 in the survey, overall, is that a large portion of the
6 non-response from journals that we survey came from journals
7 which are not copyrighted.

8 First of all, let me identify the response rate,
9 itself.

10 We did approximately 32% of the 1,672 publishers,
11 and 39% plus of the journals of the 2,552. A total of
12 872 -- or approximately 90% -- of the responding journals
13 indicated that they were copyrighted; and, by contrast,
14 analysis at the Library of Congress, indicates that only
15 59% of non-responding journals are copyrighted.

16 The response levels, therefore, represent, in all
17 probability, a greater proportion of those journals whose
18 views and decisions concerning copyright policies are signi-
19 ficant in the measure of attitudes.

20 The responses to the questions in the questionnaires
21 were analyzed, in total, for the publisher or journal group
22 responding, and, also, to determine differences between
23 for-profit, and not-for-profit publication sectors; between
24 subject disciplines of pure science, applied science, and
25 technology; social science, and the humanities; and by size

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 of circulation for each journal.

2 At the request of King Research -- which is, of
3 course, doing a parallel study for CONTU -- publisher
4 responses were broken down between those who published only
5 one journal; and those who published more than one.

6 Of the total responses referred to earlier,
7 450 approximately come from publishers who published only
8 one journal, in the survey. This represents 84.6%
9 of the responding population, and 46.5 %
10 of the journal population.

11 Of the publishers in the survey, 95.5 % distrib
12 five or fewer journals, and these, in turn, include 61%
13 of the responding journals.

14 A point that I think emerges from this data is
15 that the scholarly and research publishing consists, to a
16 large extent, of relatively small, non-profit journals,
17 whose publishers probably have little knowledge, or they
18 pay little attention to the complex and lengthy provisions
19 of the new Copyright Act.

20 Clearly, a number of major publishers, both in the
21 for-profit and not-for-profit sectors, have done so, but
22 this represents only a minority, although it is a substantial
23 minority.

24 Inexperience and lack of prior thought by a
25 large proportion of the response group shows up clearly

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 in the responses to the survey.

2 We received numerous letters of comment from
3 publishers, which provided a back-up to the actual data
4 that was reported.

5 I would like to, briefly, discuss the journal survey,
6 itself; the differences in publication frequency as between
7 not only the commercial and the non-profit sectors, but also
8 as between subject disciplines.

9 Better than half of the non-profit journals
10 published quarterly, or less frequently, while the same
11 holds true for commercial journals in only 36% of the cases.

12 Scholarly and research publishing is heavily
13 populated by small journals. Better than half of the journals
14 in the survey had a circulation of under 3,000 copies, and
15 this figure is even higher for commercial than for non-
16 profit journals. However, large -- that is between 10,000
17 and 100,000 circulation -- journals are representing only
18 19.5 % of the journals, and include 74.2% of
19 the issues distributed.

20
21 Less than half of the responding journals reported
22 foreign circulation which exceeds 20% of the total; and only
23 27% have foreign circulation of above 30%. However,
24 smaller circulations are more heavily dependent on foreign
25 subscribers.

Journals: The great majority of journals which responded to the survey and, particularly, the commercial journals, copyright each issue published. They do not, however, include individually copyrighted articles in many cases, and commercial journals tend to avoid this, in particular.

About three-fourths of the journals responding do not employ page charges at all, and only 3.35% have mandatory page charges. Of course, commercial journals make less use of page charges; and large commercial journals, responding, don't use them at all.

Better than one-half of the responding journals currently sell reprints directly, but only about one-third sell reprints through an Agent. The use of such Agents is fairly concentrated among commercial journals. The two Agents -- that is, Xerox's University Microfilm and Information Unlimited, which is dominated by Xerox's University Microfilm.

Rates charged by journals which sell reprints vary widely, although most non-profit journals are willing to accept \$3.00 or less for a 10-page article -- this is for non-profit journals -- and better than half of the commercial journals are willing to accept orders for \$5.00.

However, a sizeable minority -- particularly in the commercial sector, charges even \$7.00--or even more--for a 10-page article--supplied on pre-payment to domestic customers.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

CHGJE (202) 347-0224

1 Perhaps surprisingly -- and indicative of lack
2 of informed judgement mentioned earlier -- journals which
3 do not sell reprints express themselves as satisfied with
4 lower payments, in response to a hypothetical question, than
5 journals which do sell them.

6 Two-thirds of the responding journals indicate
7 no reprint sales at all;--or sales which average under six
8 reprints a week. Only 13% of responding journals sell
9 more than 30 reprints per average working day and can be
10 considered to be in the business of selling reprints.

11 Responses indicate that more than half of the
12 journals filled orders within five days of receipt, although
13 17% take a month or longer to comply.

14 More than 50% of responding copyrighted journals
15 expect no payment to them from the operation of a clearing
16 house, or from an Agent, and this lack of expectation was
17 particularly pronounced among commercial journals. Where
18 compensation was expected, 50 cents was acceptable in
19 about half the cases. However, a small minority indicates
20 considerably greater expectations -- in some cases, well
21 above \$5.00.

22 At the same time, because of lack of information
23 -- apparently because of lack of information -- responding
24 journals do not wish to commit themselves to licensing
25 directly; or through an Agent; or clearing house. Where

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

CHIEF (202) 347-0774

1 there was willingness, 50 cents is an acceptable payment in
2 more than half the respondents, but a small minority hold
3 out for as much as \$7.00 or more.

4 By a substantial margin, journals prefer to sell
5 microform editions through an Agent, rather than directly.
6 At the same time, they are not willing to authorize
7 copying from microform during the current year of
8 publication, and only slightly more are willing to permit
9 unrestricted copying from past year microforms.

10 Although many journals do not presently exact
11 payment charges from libraries, they are overwhelmingly
12 unwilling to grant blanket permission for copying, or
13 blanket permission for inter-library loan.

14 This negative reaction to carte blanche subsidies,
15 subsidies only to a certain extent for back year permission,
16 and is particularly strong with relation to libraries,
17 and for-profit organizations.

18 Where there is willingness for back year unlimited
19 copying, the cut-off is most frequently set at one year.
20 Only a small percentage of responding publishers feel that
21 inclusion of I.S.S.N. numbers would facilitate the
22 provision of reprints or photocopies at a lower price.
23 This may be true, in part, because only slightly more
24 than one-third of the responding journals presently are
25 identified with I.S.S.N. numbers, and some responding publishers

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 may not even have been aware of what I.S.S.N. numbers were.

2 This would apply, primarily, to the smaller journals.

3 Under licensing preferences, all types of
4 publishers indicate a strong preference for direct licensing-
5 as against the use of either Agents, or clearing houses.

6 It should be stressed that this question was answered as
7 something of an abstraction, since no specific clearing
8 house mechanism proposal had, as yet, been proposed and
9 distributed, either by the A.A.P. or by any other organiza-
10 tion.

11 For what are probably the same reasons, responding
12 publishers express a strong preference for supplying authorized
13 copies directly-- rather than through clearing houses, or
14 Agents.

15 As stressed in the General Comments, the use of
16 clearing houses and Agents is a concept which is probably
17 little understood by some of the publishers of small and
18 scattered journals; and it would require explanation and
19 publicity to gain wider acceptance.

20 Responding publishers saw little practical
21 utility in teletype equipment for receiving orders,--in large
22 part because very few publishers have such equipment, at
23 present.

24 Of the 43.5% publishers who responded to a
25 question as to whether they presently sell reprints or

1104 CARY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 photocopies directly, or through an Agent, about three-
2 fourths continued to express their unwillingness to do so
3 in the future.

4 I believe this covers the principal points --
5 the principal results -- of our study.

6 I would be glad to entertain any questions, or
7 requests for explanation or elaboration that you might have.

8 JUDGE FULD: Mr. Cary?

9 COMMISSIONER CARY: Dean Fry, I believe I heard you say that
10 about 50% of the publishers indicated that they expected,
11 I believe, fifty cents as a return.

12 Did your study have any information which would
13 indicate whether or not a viable organization could be
14 established, if you assume that 50 cents would be the
15 average receipt?

16 That may be an unfair question.

17 If it is, I apologize.

18 DR. FRY: Well, I don't think our study could be
19 interpreted as leading to that conclusion, simply because
20 discussion of the clearing house concept was not yet wide-
21 spread when we queried the publishers.

22 Now, their response, as I indicated earlier,
23 except for the larger publishers -- the large society
24 publishers; the large for-profit publishers -- there was
25 frequent indication of a lack of information, and a lack

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PR-10E (202) 347-0224

1 of concern about selling reprints--if they were not, already,
2 selling reprints.

3 Those who were not already selling reprints,
4 for example, showed an inconsistent posture of agreeing
5 to a lower price -- that is, as a hypothetical question --
6 for selling reprints, than those who were already in the
7 business.

8 So that I think this illustrates the extreme
9 diversity among publishers; also the fact that at least
10 the almost 500 small publishers who reported among the
11 total group were not yet aware of the total ramifications
12 of a clearing house. They were looking on it, also, I
13 think, perhaps as a mechanism of convenience and, also,
14 perhaps, as a deterrent, rather than a source of income.

15 COMMISSIONER CARY: Thank you.

16 JUDGE FULD: Mr. Frase?

17 MR. FRASE: In view of the very large proportion
18 of these journals -- you take your 2,500 universe -- that
19 are not copyrighted, and others who would be willing to go
20 beyond what the law requires in permitting copying, especially
21 by non-profit libraries, would you suggest that, for the
22 convenience of the user, it might be a recommendation of this
23 Commission to make sure that there is something in the journal
24 that tells the user whether the journal cares whether you
25 copy, or not; how old an issue you may copy, and so forth.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 DR. FRY: Yes. I think our Study 15 would agree
2 to that, fully. As a matter of fact, this was one point
3 which I skipped, earlier, in my presentation.

4 We feel that this would be a very useful step to
5 take; and have prepared some specimen terminology to be
6 distributed as potential notices, which would include
7 such phrases as -- and these are just examples -- "for
8 private study and research"; "Willing to let non-profit users
9 copy"; "Restrictions limited to the first year following
10 publication", and so on.

11 That kind of explanation appended to the
12 copyright notice should prove very useful.

13 JUDGE FULD: Are there any other questions?

14 COMMISSIONER Dix?

15 COMMISSIONER DIX: I am a little puzzled by this No. 20
16 in your summary list here -- the last comment that you made:
17 This large group of publishers who said that they were not now
18 selling reprints, and they had no intention of ever selling
19 reprints.

20 Now, is this a "public be darned!" approach?

21 Or is it that they simply are perfectly willing
22 to be giving permission, without selling?

23 I wondered if you had enough supplementary comments
24 to indicate what the trend of that answer was?

25 DR. FRY: No. I don't think it is at all a
"public be darned" approach! We did not discover that --

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 either in the formal responses, nor in the two or three hundred
2 letters that accompanied them.

3 Rather, many of the publishers took the view
4 that this would get them involved in a complicated,
5 bureaucratic mechanism; that it was, perhaps, not worthwhile
6 from that point of view. Many of them also provide their
7 authors with reprints, and some of this group referred to,
8 undoubtedly on request, would provide permission to reprint.

9 I think a word of caution is due here, though, that
10 as the meaning of the new Copyright Law filters through to
11 the smaller publishers, that perhaps some of these present
12 attitudes that we have reflected will be changed.

13 JUDGE FULD: Any other questions?

14 (No response)

15 JUDGE FULD: Thank you very much, Dr. Fry.

16 Did you have something to announce, Mr. Levine?

17 MR. LEVINE: In the continuing saga of a
18 Commission in search of a meeting room, tomorrow morning
19 we will be meeting next door, down the hall, in room 2220.
20 We are preempted, I think, by Congress, from this room.

21 JUDGE FULD: We will reconvene at 9:30.

22 COMMISSIONER DIX: And it is your expectation we will be
23 through about lunch time?

24 MR. LEVINE: I would anticipate that the speakers,
25 and the discussion with the speakers, would last a maximum

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 of two hours. It may be longer than that. It is merely a
2 question of how much Commission discussion takes place
3 after that.

4 JUDGE FULD: Do any of the other Commissioners
5 want to say anything?

6 If not, we will adjourn until 9:30 tomorrow
7 morning.

8 (Whereupon, at 4:30 p.m., the meeting was
9 adjourned until 9:30 a.m., July 12, 1977)

10 -o0o-
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES
2 OF COPYRIGHTED WORKS
3 (CONTU)
4
5
6

7 Second Day of
8 FIFTEENTH MEETING

9 July 12, 1977
10

11 CHAIRMAN: Judge Stanley FULD

12 and

13 MEMBERS OF THE PANEL
14
15
16
17
18
19

20 Room 2220 Rayburn Building
21 Washington, D.C.
22
23
24
25

C O N T E N T S

STATEMENTS OF:

P a g e

ALLEN FERGUSON

164

President, Public Interest Economic Center

BERT COWLAN

197

Co-Director, Public Interest Satellite Association

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 JUDGE FULD: May I call this meeting to order?

2 This morning, we shall hear from representatives
3 of the Public Interest Economics Center and the Public
4 Interest Satellite Association. These consumer oriented
5 public interest organizations have been engaged in a project
6 to identify the consumer impact of changes in the copyright
7 law regarding computers and photocopying.

8 This project is involved in the preparation of
9 economic analyses by the staff of the PIE-C, and the convening
10 by PISA of meetings with the representatives of consumer
11 and public interest organizations, to comment on the
12 economic analysis.

13 Our first witness will be Dr. Allen Ferguson,
14 President of the Public Interest Economics - Center, who will
15 summarize the findings and conclusions of his study.

16 He will be followed by Mr. Bert Cowlan, Co-
17 Director of the Public Interest Satellite Association, who
18 will summarize the results of the meeting with public interest
19 organizations' representatives, and present PISA's reactions
20 to the PIE-C report.

21 STATEMENT BY ALLEN FERGUSON
PRESIDENT, PIE-C

22 and

23 BERT COWLAN
CO-DIRECTOR, PISA

24 JUDGE FULD: Dr. Ferguson, we welcome you here,
25 today.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 DR. FERGUSON: Thank you very much, Judge Fuld.

2 I want to begin by, essentially, congratulating CONTU,
3 if I might do so, for running what seems to me to be an
4 extraordinarily sound experiment in public interest parti-
5 cipation in government decision making.

6 JUDGE FULD: It is a subject in which we are very
7 much interested.

8 DR. FERGUSON: Well, that is good! It is very
9 unusual that a government agency both encourages public
10 interest participation, and provides resources that permit
11 public interest participants to be reasonably well informed
12 on the issues through some special analysis, rather than
13 leaving them to dig their information out of more or less
14 casual sources.

15 What I would like to try to do is go through a fairly
16 brief summary of our report, and I will cut through the
17 material on a different tack from the way it is written, to
18 give you a somewhat different view and, also, to avoid boring
19 you -- and especially myself -- to death with the same
20 material in the same sequence and structure.

21 In going through it, I notice that there are a
22 number of errors, and we are going to try to reclaim the ribbon
23 copy and clean up some of those things, The first two pages
24 should not be in your copy. Our contract calls for
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 publishing a summary, in our own newsletter, as a partial
2 means of disseminating this.

3 The first two pages are the two pages that were
4 supposed to go into our newsletter, telling of things that
5 you already well know.

6 Let me begin by identifying the questions.

7 In broadest terms, the basic question is whether the
8 interests of consumers would be advanced by increasing, or
9 decreasing, the stringency of present copyright law.

10 There are a number of associated questions, of
11 course, as it applies to these particular areas.

12 There are a number of associated questions, many
13 of which came up in a meeting of the public interest advocates
14 called by Bert Cowlan and his colleagues. Let me
15 read those, briefly.

16 Should any royalty charge at all be permitted?

17 Should any royalty charge be permitted only
18 for particular uses, or for particular users?

19 A closely related question raised by several
20 individuals or groups was whether individuals or public
21 interest groups should be exempt from payment of royalties
22 under some sort of fair-use doctrine.

23 Should research and development paid for by the
24 government be subject to copyright assignable to private
25 interests?

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Should copyrights be available only to individuals--
2 rather than to corporations or government entities?

3 Since an individual, or a small firm, cannot
4 realistically defend its copyright against the large firm,
5 what, if any, adjustments in copyright law should be made
6 in that direction?

7 Finally, a kind of sweeping question of whether
8 technology will overtake us.

9 I think I will go next to the answers to these
10 questions -- i.e., conclusions -- and then build up the
11 analysis that underlies those answers.

12 Let me begin with photocopying, and answers to the
13 basic question. The answers are really in the form of
14 recommendations which would answer that question, in our
15 judgement, and bring about a situation whereby the consumers'
16 interests would be maximized.

17 With regard to photocopying, we recommend that no
18 royalty charge should be allowed on photocopying other than
19 photocopying for re-sale. To put it more precisely, the
20 general conclusion of the analysis is that CONTU should not
21 recommend any further restriction on copying beyond those
22 that are included in the 1976 Act; and that fair-use should
23 be formally defined to include photocopying and similar
24 reproduction for personal use.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 With regard to software, our conclusions not only
2 are more complex, but are basically different.--in fact,
3 opposite, in large part, from those on photocopying. We
4 draw a distinction: The problem of monopoly runs through
5 this whole thing, since we are talking about a "special"
6 privilege" monopoly. For independent software firms
7 not in control of a substantial portion of the market,
8 continued use of non-disclosure contracts should be allowed.
9 For the same firms, copyright availability should be formally
10 enacted, probably, or possibly, under a separate title of
11 the copyright law, but with the term of protection still
12 equal to, or longer than, the expected commercial life
13 of most software.

14 Here we differ rather significantly from
15 Professor Baumol and his colleagues; and you may have some
16 interest in why we do that.

17 Research should be undertaken to find methods of
18 making copyright protection more effective, to more small
19 copyright holders.

20 Research should be undertaken immediately to
21 ascertain the extent to which hardware manufacturers have
22 monopoly power in the software instrument; or are likely
23 to develop it.

24 Measures should be taken to eliminate the existence
25 and the danger of monopoly power in the software field.

1 In decreasing order of desirability, the
2 measures are:

3 (1) Denial of trade secrecy and copyrights to
4 large hardware manufacturers.

5 (2) Statutorily forcing hardware manufacturers
6 to spin off their software operations.

7 (3) Anti-trust litigation to force hardware
8 manufacturers to divest themselves of their software
9 activities, and to split up any presumably future software
10 firms with major market power.

11 (4) Compulsory licensing with regulation of
12 prices -- i.e., of royalties -- holding profits down and
13 prices down to the competitive level.

14 Our final recommendation in this area is that
15 research should be undertaken to ascertain whether there are
16 general operational useful criteria for Federal subsidiza-
17 tion of software--essentially as an alternative to the
18 copyright royalty scheme.

19 The third area which was to have been examined was data
20 bases, and computer-created works, which we consider to be
21 essentially a form of data base.

22 We have three conclusions:

23 (1) Copyright should be available for both
24 the information inputs into, and the outputs from
25

1 computerized information systems,

2
3 (2) . Computer created work:

4 Empirical study of the structure and function of
5 the industry should be initiated and continuous
6 monitoring of the changes should be performed.

7 Finally, (3) federal policies to reduce or
8 prevent monopolistic tendencies, Essentially the same list
9 in the same order as before should be undertaken as appro-
10 priate.

11 Now, those are our basic answers to the basic
12 questions of general policy in these three areas.

13
14 Now, since I raised the half-dozen sets of other
15 questions and what I have called associated questions --
16 and they do not play a big role in our analysis -- I would
17 like to sort of interrupt the flow of this, and not only
18 read to you the conclusions, but take a minute or two on
19 why we arrived on the answers to those conclusions; and then
20 go into the analysis that backs up the conclusions that I have
21 just read to you.

22 As already indicated, we have concluded that copy-
23 right protection for photocopying should be available in the
24 event of reproduction for re-sale, and should be available
25 for all computer-based information.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 The question is whether the fair use doctrine
2 should be expanded to permit royalty free use of such
3 materials by non-profit firms.

4 Professor Baumol came out against that; and he did it.
5 I think, entirely on efficiency grounds.

6 In the usual constraints of economic analysis, there
7 is no basis-on efficiency grounds--for granting any such
8 exemption. However, social policy should -- in my judgement
9 -- be based on more than efficiency grounds, alone.

10 Further, there are, in economics, some very
11 important reasons why such exceptions, or such special
12 treatment, can be shown to serve the interests of the public
13 at large.

14 First, there is what economists call "externalities"
15 -- the product of public interest groups' non-profit
16 corporations is judged, as reflected by the special status
17 under tax laws, to be special, to be of broad public interest,
18 to be of broad public value, of a value greater than the
19 market places upon the products of those institutions.

20 Second, many such organizations are involved in the
21 redistribution of wealth in one way or another. Some are
22 involved in the direct redistribution of wealth -- for
23 example, by making information available to people to whom
24 the information would otherwise be too costly to obtain.

25 The market produces optimal results in a social

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHOTO (202) 347-0224

1 sense only if it begins from a socially optimal wealth.
2 So, unless one believes -- which I would find rather
3 extraordinary -- that the existing distribution of wealth
4 is socially optimal, then the market solution to any
5 allocative problem -- including the value of the output
6 of public interest groups -- is not socially optimal.

7 One way to move toward the social optimum is
8 to provide various kinds of support for such organizations.

9 Third, there is a more modern justification,
10 maybe I should say "more recent" -- in what is called the
11 "public choice literature" -- that is basically defined,
12 decisions are made on the basis of information -- nothing
13 new -- and that if anyone is rational in gathering informa-
14 tion, he or she gathers it somehow reflecting the cost
15 of obtaining it for any expected value of that information.
16 This leads to what I will call "special interest groups" --
17 which are particular producer-interest groups, but not
18 exclusively, which have a motive for subsidizing the availability
19 of information.

20 One need only to look at the lobbying activity on
21 the Hill, to see the validity of that.

22 Subsidized information distorts, which can be
23 demonstrated. It distorts the decision-making process,
24 and it equally can be demonstrated that the subsidization
25 of the objective or countervailing information leads
decision makers closer to their optimal decision, if they

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 had all of the information available to them.

2 So we have three bases for saying that public
3 interest organizations have some special plan.

4 Theoretically, there would be more efficient ways
5 of meeting this special plan. For example; direct Federal
6 subsidization of public interest groups.

7 The difficulty with that is pretty patent. Since
8 a great many of the public interest groups are involved
9 in criticizing what the government does, it is not
10 reasonable to suppose that there will be an unbiased
11 distribution of Federal subsidies to public interest groups.

12 So, for both practical and theoretical reasons,
13 it is our judgment that such an exemption -- exemption
14 from royalties -- even in the case of re-sale, would be
15 desirable for both administrative convenience and social
16 policy.

17 The exemption for administrative convenience, I
18 would think, should be extended only to 501(c)(3)'s, but
19 I would not quibble over where,, within the 501(c)(3)
20 category, the cut should come.

21 The second of the questions is whether
22 copyright ownership should be restricted to individuals.

23 Our answer to that is "No"; that, even if one
24 were only interested in the welfare of individuals, denying
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 individuals the right to sell the property right to
2 corporations, or government entities, deprives the individual
3 owning the copyright of much of its property value. The
4 question whether research and development funded by the
5 government should be free of assignable copyright, is
6 just too much for us to have handled in this study. It is
7 a worthy subject, but much too complicated to try to get now.

8 I have already said that we recommend some form
9 of assistance--or at least exploring how to develop assistance--
10 for small copyright holders in defending their copyrights,
11 and with regard to technology. Our recommendations are
12 restricted only to the present state, and the more or less
13 immediately foreseeable future.

14 The reasons for that are threefold:

15 (1) We found ourselves lacking in clairvoyance--
16 which was something of a handicap!

17 (2) Most of the arguments that appear to arise
18 on the grounds of things over the horizon -- technologies
19 over the horizon -- are recommendations for restriction
20 against use of copyrighted material as a means of fore-
21 stalling adverse contingencies; and there are two aspects
22 of that:

23 (1) I think casual observation of it and a lot
24 of written work suggest that once a government institution
25 is established, it is very difficult to dis-establish it; and

1 (2) I think that when and if the real problems
2 emerge, we can count on the affected special interests
3 to make the case-effectively--on the basis of existing data,
4 rather than on speculation.

5 Now, I am through with the second set of questions.
6 I want to go back to the analysis that underlies our conclu-
7 sions about what I have alluded to as "the basic question". I
8 want to touch on two things -- sort of straight through --
9 as to how we reached the conclusions that we did, and why
10 the conclusions are so different in the A.D.P. area, versus
11 the photocopying area.

12 I will outline the general analysis, and then pick
13 up the specific analyses in the three areas.

14 To begin with, in talking about consumer interests,
15 we have to define "consumer". We define "consumer" to mean
16 the ultimate consumer -- the household; the individual who
17 buys things at the retail level, essentially. This leaves
18 out a number of people who are sometimes thought of as
19 consumers; and we are talking not about a category of people
20 distinct from other categories of people. We are talking
21 about people in their function as consumers.

22 In a sense, in reality, everybody is a consumer--
23 but, if one begins to mix the function of an individual as
24 a saver, as a worker, as an investor, with his or her function
25 as a consumer, the analysis becomes false, in part, in my

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 judgement.

2 Next, it seems reasonable to define "consumer
3 interest".

4 A consumer in economics plays an extraordinary
5 role. The only legitimate purpose of any economy, in my
6 judgement -- and there is a substantial body of concurrent
7 opinion -- is to increase the well being of the people in
8 that society and, since everybody in the society is a consumer,
9 it is quite reasonable to say that the purpose of any
10 economic activity is to increase the well being of consumers.
11 That would have to be elaborated in some areas--if we got into
12 a problem of the trade-off between a consumer and a worker
13 position. That does not seem to be a problem in the present
14 context.

15 Where does the consumer's interest lie?

16 How does the consumer's well being get increased
17 as a functional policy?

18 Basically, the consumer's interest lies in the
19 efficiency with which the economy responds to consumer needs.
20 It is not just the efficiency with which the economy works --
21 unless you define "efficiency" in terms of consumer "needs";
22 which is the way most economists would define it.

23 In the specific area -- since information is so
24 ubiquitous a part of the economy -- the consumer's interest
25 can be defined one degree more narrowly. I should say, "less

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 broadly.

2 The consumer's interest is in an adequate amount
3 of valuable information, both now, and in the future, and
4 the question is: Whether to manipulate copyright
5 possibilities in order to create a superior balance of in-
6 formation now, versus information in the future.

7 Before going into that, we have to talk a bit
8 about the peculiar characteristics of information. There
9 are a lot of them; and I will mention only the two most
10 important ones.

11 One is what we call

12 -- in the economist's technical jargon -- "exclusivity".
13 I am sorry: Non-exclusivity, or non-appropriability.

14 The concept simply means that the value of a product
15 is non-appropriable if the producer cannot appropriate
16 from the user, the benefits to the user of using that output.
17 He cannot exclude people who do not pay for the use of that
18 entity. Information has the non-exclusivity characteristic--
19 very strongly. Once a thing exists, if there is no legal
20 mechanism or secrecy to protect it, it is physically easy
21 to reproduce the information, without hindrance by the
22 producer.

23 So that--in the absence of constitutional constraints--
24 information is characterized by the special quality of "non-
25 exclusivity".

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Also, there is another characteristic. That is,
2 the copying cost of an existent piece of information is a
3 great deal less, typically, than the total cost of producing
4 and copying a unit of that information. So that an outsider
5 -- so to speak -- once the information exists and the work
6 of whatever it is -- doing the research, or making the
7 program -- has been done, a copy can be made at a very
8 small fraction of the cost of both its original production
9 and reproduction process.

10 The significance of that is that -- to the extent
11 that creation and dissemination of creative work is
12 stimulated by the prospect of monetary reward; to that
13 extent -- the supply of information tends to be less than
14 the socially optimal supply, because the producers cannot
15 capture the full value of what they produce.

16 Now, when I say "full value", I would have to
17 modify that to say that's at the margin; and that could carry us
18 far afield. I have a footnote I would like to insert there.

19 In other words, there is a tendency for consumers
20 to be provided with less than the optimal amount of
21 information, by virtue of this characteristic.

22 Copyrights are designed to provide producers
23 of information with monopoly privileges intended to increase
24 the prospect of monetary reward -- so as to remove some, or all,
25 or more than all, of the innate disadvantages associated with

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PR/2RE (202) 347-0224

1 the non-exclusivity.

2 This brings us to what we called-three times
3 in the report,--"basic trade-off".

4 Let me read the statement, because it was once
5 written with a certain amount of care.

6 "To the extent that the supply of information
7 is dependent upon royalties, there is a clear trade-off.

8 "The greater the cost imposed on users of copyrighted
9 material, as a whole, the higher will be the return to the
10 producers, and the greater will be the supply of information.

11 "Higher prices to consumers, on the other hand,
12 raise the cost of using existing information and, hence,
13 reduce effective availability. To the extent that new
14 research and other creative work is dependent upon using
15 existing information, the problem is made more complex.

16 I said this was carefully written, But I don't think
17 it came off very well. What I am saying is this:

18 That the imposition of a royalty reduces the
19 availability -- i.e., raises the cost of the use of existing
20 information -- that is, the immediate cost to the consumer.
21 At the same time, that increases the incentive for the produc-
22 tion and dissemination of new information. So, initially,
23 you have a fairly simple trade-off. The higher the total
24 sum of the royalties, the greater the incentive for producing
25

1 new information which, subsequently, benefits consumers by
2 making the possibility of further development of informa-
3 tion, or the development of new things, more readily
4 available.

5 There is a small wrinkle, and that is that the
6 latter process of development of new information depends
7 on the use of existing information. So a high cost of
8 using existing information does tend to reduce, somewhat,
9 the creation of new information. That, I think, is a
10 secondary consideration; and its basic trade-off is the one
11 I mentioned, between present and future information.

12 We specify the conditions under which increased
13 copyright power would serve the consumer, or the public.
14 The supply of information is -- or in the absence of copyright
15 protection would be -- less than socially desirable; and more
16 stringent copyright authority would increase the supply
17 toward the optimal. Imposing a copyright system, -- or
18 permitting a copyright system -- would be the most efficient
19 way to move the supply toward the social optimum.

20 Royalty payments on prices charged reflect
21 the value of the product to its user.

22 Finally, there are no significant barriers to
23 entry.

24 Now, with regard to the first, whether the supply
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 of information is less than the social optimal -- as I have
2 already indicated -- given the non-appropriability, there is
3 a tendency, in this direction, that may or may not be offset
4 by such other things as the governmental subsidization of
5 the production of information. But there is a tendency in
6 that direction.

7 Greater freedom to impose royalties would, presumably,
8 be used by producers of information only to the extent that
9 it would increase their revenues and, in the absence of
10 severe constraints, any increase in revenues would tend
11 to increase the supply of information. This is a restatement
12 of the basic motivation for the use of the royalty.

13 There are two caveats with that:

14 One is that it does not follow if producers are
15 totally insensitive to monetary rewards, or the prospect
16 of monetary rewards; and

17 Secondly, it does not follow if there are
18 restrictions to entry.

19 This is the way the monopoly thing runs through
20 this all the time. The more effective the monopoly,
21 the less the responsiveness of the particular sector of the
22 information system will be, to any kind of increase in
23 revenues.

24 So there is a basic way of arguing that there is
25 some justification for a larger, expanded role of copyrights.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 There are three questions that remain. They can
2 be collapsed into two; and I will collapse them into two:

3 To what extent are producers of the relevant form
4 of information responsive to the prospect of monetary
5 reward, including other significant barriers to entry;
6 and, secondly, are there more efficient and more equitable
7 ways of moving toward some concept of the socially desirable
8 amount of output?

9 We can say that a movement towards the socially
10 desirable amount of output is, or should be, correlated
11 with capturing and appropriating the benefits produced.

12 What I want to do is address these three questions,
13 area by area, beginning with photocopying,

14 We have concentrated on photocopying, although
15 your mandate, as you are well aware, calls for your examina-
16 tion of use of copyrighted works in machine reproduction. We
17 narrowed to one area what we say lies elsewhere, but
18 we have no data anywhere other than photocopying, and one
19 little bit of information on offset, which I will come
20 to immediately.

21 I need to make a couple of statements -- background
22 statements -- about photocopying, before going into the
23 analysis, and I want to emphasize that all of the empirical
24 information is extraordinarily weak. This is an area of,
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 essentially, just no good, systematic, extensive data; so
2 one has to work with a combination of intuition, casual
3 observation, and shreds of information.

4 It appears that only a small fraction of photocopying
5 is photocopying of copyrighted material. From a very helpful
6 letter from Robert Gray -- commenting on our earlier draft --
7 we get the following information:

8 There are no good sources of information, today,
9 on the fraction of photocopying that is copying of copy-
10 righted material, but there was a study begun at the
11 University of Amsterdam in 1972, and it showed that something
12 in the order of six percent -- five percent -- of photo-
13 copies were copies of copyrighted materials, and considerably
14 less than that -- something in the order of two-and-a-half to
15 three percent -- of the offsets and stencil materials,
16 was copyrighted materials.

17 This certainly concurs with national observation --
18 and that is nice, when you have casual observation and
19 shreds of information going in the same direction. You feel
20 much more comfortable, although I would never have gotten
21 this far as an economist if I did not know how to extrapolate
22 from a single point, anyway.

23 The second kind of information is that photocopying is
24 apparently highly concentrated in technical journals -- by
25 which we mean cultural and professional journals -- for which

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224
L E A 1104

1 there are perfectly obvious reasons -- analytical reasons.

2 The cost of purchase per page of a technical
3 journal and of certain other things, is very high, relative
4 to the cost of copying, in contrast, for example, with
5 a novel, where the cost of copying is a large multiple
6 of the cost of purchase per page.

7 The photocopying appears to be largely done in
8 institutions -- including businesses. It is largely a
9 substitute for note-taking--not a substitute for purchase,
10 or subscription. Again, the data is abundantly bad and,
11 in the absence of data, we resort to the usual trick of
12 quoting an authority; and you are familiar with the
13 statements of Dr. Gordon Williams, Director of the Center
14 for Research Libraries in Chicago..

15 He says:

16 "In my own observation, use of these machines"--
17 that is, coin-controlled photocopying machines, and likewise
18 --"and, indeed, in my own use, use in lieu of any possible purchase,
19 is so rare as to be absolutely insignificant. They are
20 primarily used in lieu of note-taking by hand. If the
21 operation of these machines is to be stopped or hindered, I am
22 confident that virtually no more book or journal sales would
23 result. The available evidence indicates that the number of
24 people who -- faced with photocopying restrictions -- would
25 subscribe to journals, is low. Many journals have few

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 readers. A person might casually photocopy an
2 article from a journal with no intent of subscribing as an
3 alternative."

4 Again, quoting Dr. Williams:

5 "The American Psychological Association found
6 that the average number of readers is only seven per
7 article in their publications, and the American Chemical
8 Society found it to be only ten."

9 So that the frequency with which articles are read
10 in these journals is extremely low.

11 There is some additional information in the article
12 by Line and Wood that Professor Machlup quoted yesterday.
13 Let me touch a couple of things, here, that he did not
14 allude to.

15 About 30% -- only 30% -- of the photocopying in
16 the British Library Loan Division appears to be photocopying
17 of issues currently in print -- not the current issue -- issues
18 in print. There is an extraordinarily low ratio of
19 articles versus circulation. He touched on three or four
20 of the highlights. Let me elaborate a little bit.

21 The worst example, so to speak, was

22
23 Research Communications in Chemical Pathology and Pharma-
24 cology.

25 350 articles published in the three years

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

TELETYPE (202) 347-0224

1 prior to the survey. were copied. The circulation is estimated
2 at a thousand. So this sounds like 35% of the journals
3 are copied. Now, you say, "That is over a three-year
4 period" and, roughly divide it by three, and make the
5 assumption that there is an average of ten articles per
6 issue, which is a reasonable assumption -- although I
7 must confess I have never read Research Communications in
8 Chemical Pathology or Pharmacology, so I may not be
9 competent to quote. But if we make those two assumptions,
10 then we are down again to something like the equivalent
11 of 1.2% of the number of subscriptions being copied once
12 in a year.

13 Now, these are funny numbers; but that is the
14 worst case in his list.

15 Now, that is the background information that I think
16 is important. Let me -- since I have taken so long with
17 this -- recapitulate:

18 Most photocopying is not of copyrighted material.

19 It is concentrated in technical journals.

20 It is concentrated in libraries and other institu-
21 tions.

22 It is largely a substitute for note-taking -- not
23 for purchase or subscription.

24 Now I move to the first of the three questions:

25 Are producers responsive to the prospects of

1104 GARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PERMIE (202) 347-0224

monetary rewards through royalties?

We can practically say, as far as authors are concerned, the answer is "No". Authors of technical journals predominantly have other sources of income. The royalties that they get are, at best, miniscule, and they publish for other motives.

Now, publishers, on the other hand, are, in fact, responsive to the prospect of monetary reward. At least, that is what they tell their stockholders, if they are commercial, but about 68% -- according to Dr. Bernard Fry -- of the technical journals are published by "not-for-profits". Now, as a person who runs a "not-for-profit", I am aware of the fact that that does not mean they are insensitive to revenues. It means that they may respond in a somewhat different way.

The question is: How responsive, then, are the producers of photocopyable works - - if I can use that particular non-word -- how responsive are they to potential monetary incentives?

Does that include the right to charge royalties to provide the potential of monetary rewards?

The first question that is related to this is whether publishers, as a whole, need the increase in revenues that might be generated by the imposition of royalties on photocopying. There are several things to that - -

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

P4434E (202) 347-0224

1 without answering the question in a definitive way--because,
2 again, the data do not permit a full answer.

3 Most of the output of commercial publishing houses
4 is not of the kind that is vulnerable, so to speak, to
5 photocopying. There is no evidence of serious financial
6 need; and part of the reason, perhaps, for this lack
7 of evidence -- although it is not very persuasive -- is
8 that there are no data on line-of-business profits and loss
9 and loss in most of the publishing industry.

10 In light of the fact that I think any economist
11 would agree that there is a presumption against the grant
12 of a monopoly, I would think that the burden of proof
13 lies squarely on the industry to demonstrate--through line-of-
14 business reporting--any such need.

15 Furthermore, most of the existing publications
16 are far beyond the minimal efficient level for production.
17 Again, the line, indeed, there, shows that there are only
18 thirteen journals in their sample out of fifty-nine for which
19 they have the information, with circulation of less than
20 5,000 a year,--and there are a number of journals that are
21 operating at one and two thousand per year subscription
22 levels.

23 The fact that some of these journals are sub-
24 sidized, or are run by non-profit organizations, of course,
25 makes the break-even level -- I should say the minimum

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

3-1071E (202) 347-0224

1 efficient size level, or the survival level -- lower than
2 otherwise would be the case.

3 The last point on responsiveness to monetary
4 incentives is, again, the "monopoly" question.

5 There appears to be very easy entry into the
6 journal publication activity, in spite of the fact that
7 there is a moderate degree of concentration in commercial
8 publishing and, rather, very high concentration in the
9 publication of reference works as classified by the Census
10 manufacturers.

11 So we come to the question of "responsiveness".

12 Are the producers significantly responsible to the
13 prospect of monetary reward through royalty?

14 The answer is, "No".

15 It can be modified a little bit, but the basic
16 answer is, "No".

17 If expanded journal output is desirable, is the
18 royalty system the most efficient way to do so?

19 In other words, is it an efficient way to recapture
20 any non-appropriated benefits?

21 The first question is: How efficient is the
22 royalty system?

23 There is no evidence that it would increase
24 subscriptions, significantly, or purchases.

25 It would, if it is of any value at all, increase

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

EPICURE (202) 347-0224

1 revenue and increase output, but it would do so at the cost of
2 a mis-allocation of resources, shifting resources from the
3 photocopying activities -- from the consumers of photocopying
4 services -- to publishers -- a straight transfer, encouraging
5 publishers to produce more than appears to be the optimal
6 output; and encouraging the providers of photocopying
7 service to produce less than at least the present, if
8 not the optimal, level of that output.

9 A single royalty rate, if it should be necessary
10 -- as I gather is the case -- to apply the same royalty
11 rate over a very wide range of kinds of publications, that
12 is incredibly inefficient. There is no way that a single
13 price that is independent of both the marginal cost and
14 the marginal revenue of a product, can do anything but
15 distort the distribution of resources -- the allocation
16 of resources.

17 Finally, it appears -- again, we are in, essentially,
18 a data-less world -- it appears to be an institution that would
19 impose very high administrative costs. But that tail should
20 not, necessarily, wag the dog -- witness Professor Machlup's
21 statement -- which I concur with -- that the clearing house
22 problem should not be solved. The problem, whose solution,
23 once it exists, will -- if history is any guide -- tend to
24 drive the machine without regard to its social utility.
25 The people who have a vested interest in the invention of

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 the clearing house system will have an enormous motive
2 for tossing it on the world. This is the way economy works
3 -- especially the political economy.

4 Now, we can raise the question, again, of: How
5 equitable is the system?

6 I shall try to conclude in another ten or fifteen
7 minutes. Is that all right, Judge Fuld?

8 JUDGE FULD: Ten minutes will be fine.

9 DR. FERGUSON: Picking up the question of the
10 "equitability" of the system:

11 First, it involves a windfall profit to existing
12 publishers of existing journals.

13 Second, To the extent that there is a problem
14 of non-appropriability in the library use of publications, it
15 is a consequence of free library use -- not simply a conse-
16 quence of photocopying. So that there is a kind of arbi-
17 trariness which you may, or may not, consider inequitable.
18 There is an arbitrariness in selecting photocopying as the
19 thing on which to hang the efforts to recapture any non-
20 appropriable evidence.

21 Furthermore, there is an alternative -- and it
22 is an alternative that is now practiced -- whereas I agree
23 with Professor Baumol that doing something for a long time
24 does not constitute a justification for it, the fact that
25 it has been practiced indicates that the problems of feasibility

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 are manageable, and it is a system with apparently low
2 administrative costs in contrast with the royalty system.

3 That is, of course, the mechanism of price dis-
4 crimination, whereby journal publishers charge -- and some
5 book publishers charge -- higher prices to institutions
6 than to individual subscribers, following essentially the
7 guidance -- so to speak -- in the Baumol work, that is
8 referred to in the jargon as "pricing in accordance with
9 the elasticity rule".

10 Now, then, the case, it seems to us, against
11 the use of royalties for personal photocopying is clearcut.
12 "Clearcut" may be too strong a word. The preponderance of
13 evidence here lies against that. In other words, lies in
14 favor of defining "fair use" to include personal photo-
15 copying.

16 The only significant exception would be where
17 copying is for re-sale. There, of course, you do have, clear-
18 cut appropriatability of the benefits generated by
19 the producer of the information.

20 Let me move to computer software.

21 There are three background facts:

22 About half to three-quarters of the cost, itself, --
23 total computer cost of the industry -- is the software cost,
24 itself. The vast majority of these are incurred within the
25 using organization by its own programming and computer staff,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 and hence, is largely irrelevant,--so far as copyrighting is
2 concerned.

3 However, purchased packages, of more or less
4 standard programs, is increasing rapidly.

5 With regard to the first question: "Are our
6 producers responsive to prospective rewards?" The answer
7 is, clearly, "Yes".

8 This is true both in the database case, and in the
9 software case.

10 Most of this work is done by commercial entities.
11 The split between author and publisher has no substantial
12 analogue in the data processing area. However, there
13 are alternatives: both industrial secrecy and patents.
14 At least, they are conceivable alternatives.

15 So we come to a set of questions:

16 Does the currently predominant system of
17 licensing trade-secrecy, have inefficiency which would be
18 reduced or avoided by a Statute making copyrights clearly
19 available to software?

20 If so, should trade-secrecy be banned?

21 Should patents rather than,--or in addition to
22 copyrights,--be available for software?

23 Is software unique enough to justify a new form of
24 statutory protection?
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 The arguments that trade secrecy is less satis-
2 factory than the copyright mechanism are:

3 First: That the transaction cost of trade
4 secrecy is very high. That appears to be, probably, true, in
5 an absolute sense, but not very large in a relative sense --
6 relative to the cost of software and costs in the data base industry.

7 The maintenance of trade secrecy sometimes
8 asserted to be characterized by economies of scale -- in
9 other words, it is argued that large corporations can maintain
10 trade secrecy better than small -- that argument does not
11 appear to be validated by the existing information.

12 The need for the maintenance of trade secrecy
13 tends to steer producers away from general purpose,
14 mass-marketed software; and that appears to be a valid and
15 potentially very important argument, because a firm
16 selling mass-

17 -marketed software -- over the counter, so to speak,
18 cannot readily enforce -- if at all -- trade secrecy
19 restrictions; cannot enter into a contract with everybody
20 at a store, effectively. And the term of the protection
21 under trade secrecy is totally unregulated. If trade
22 secrecy works, it either works forever, or it works on a
23 random basis until somebody in Industry Intelligence breaks
24 the code.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 But, on balance, since the copyright mechanism
2 also has its cost and disadvantages, the consumer appears
3 to have relatively little absolute preference between the
4 two mechanisms: trade secrecy and copyrights. However, the
5 potential growth of the mass marketed programs -- and this
6 is about as far as we go into future technology -- the
7 potential for that growth would appear to be stimulated
8 by clearcut copyright protection. So we come to the first
9 conclusion; that copyright protection appears to be desirable.
10 And I will come back to the exceptions in a moment.

11 However, even with the availability of unambiguous
12 copyright protection, we see no need or desirability of
13 banning all secrecy contracts. Given close competition,
14 it is in the interest of the consumer that the sellers
15 have the option of using either secrecy or copyright, -which-
16 ever appears to them to be more effective in protecting their
17 innovations.

18 I shall only say, with regard to the question of
19 patents versus copyrights, that programs and software
20 in general are sufficiently different from the typical kind of
21 copyrighted material, so that it is an interesting question, and
22 if, in fact, it turns out that the desirable period of
23 protection is shorter for the software than for other things,
24 there might be some mechanical advantage in putting such
25 legislation in a separate portion of the Act.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Now, the argument supporting the availability of
2 both -- I should say, either -- copyright or contractual
3 licensing is applicable only where monopoly power is absent.
4 Given monopoly power, the supply response will not be as
5 predicted -- the royalty would not bring forth the supply
6 response it is supposed to bring forth. That is what I am
7 trying to say.

8 Now, I will mention one or two salient things,
9 if I may, about computer data bases.

10 The area of most interest appears to be the
11 general purpose data bases. Firms who create them are
12 called "wholesalers". They tend to purchase the inputs.
13 They don't go out and get the basic information. They
14 purchase the inputs from suppliers of standard bibliographic
15 works, or Standard and Poor, or whatever, and mix them up
16 with lots of other people's information, and organize them
17 in a way that is useful to their customers.

18 This part of the business is highly concentrated.
19 There were, until recently, only two major firms in the
20 Industry: S.D.C. and Lockheed. There is a third one and,
21 lo and behold, when the third one came in, the price collapsed
22 -- which suggests something about the existence of monopoly
23 power, and also suggests the efforts that will be made to
24 co-op the third partner, to get the price back up where "God
25 intended it should be".

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 To cut through quickly, we do, in fact, recommend
2 that copyright availability be both at the input and the
3 output side of the data bases.

4 It would be desirable, again--if possible to do so--
5 to restrict that to non-competitive areas but, in this
6 instance, it would appear much more appropriate to go
7 directly at the monopoly problem, either through Statutory
8 or judicial proceedings.

9 Mr. Chairman and Members of the Commission, that
10 concludes my allegedly "brief" summary.

11 JUDGE FULD: Thank you.

12 We will hear Dr. Cowlan's reaction,--which, I gather,
13 is the PISA study.

14 DR. COWLAN: Thank you, Judge Fuld;

15 I should explain first that PISA was chosen
16 for the task not by virtue of any expertise in copyright,
17 but because of some experience with the network of citizen
18 and consumer organizations who are entering into experiments
19 and experiences in new and high technology. My personal
20 credentials may be a shade more impressive. For my sins, I
21 once spent a year as a resident Social Scientist in a middle-
22 sized computer facility, and I spent the time working with
23 satellites. One learns both legal and engineering jargon
24 in self-defense and, since this project started, I must
25 confess I picked up a fair number of words in economics.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Dr. Ferguson stole my opening -- which is one of the
2 disadvantages of going second--but I am going to use it anyway
3 because I worked hard at it. We do wish to make a
4 specific suggestion, which was not included in his opening
5 remarks and, in the interest of time, what I will attempt
6 to do is go through the report.. It is not this lengthy --
7 there are various other documents attached to it -- to
8 indicate our perception of what people said at
9 conferences that took place--whether they agreed, or
10 disagreed; or where there may have been some doubts in
11 terms of the PISA report.

12 Further, I apologize for redundancy, but I am sure
13 you all realize, in this kind of a situation, it is almost
14 unavoidable!

15 If for no other reason than that the recent series
16 of conferences commissioned by CONTU and organized by PISA
17 took place, the project must be seen as successful. CONTU's
18 attempt to seek out and hear from that segment of the public
19 rarely heard in deliberations on such issues as copyright
20 legislation can be seen as ground-breaking--especially because,
21 while public voices have been heard in the past in the legisla-
22 tive process, this marks the first time, to our knowledge,
23 that a government agency or Commission took note of the
24 fact that most such organizations live in a state of near-
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 poverty; and paid the costs of the attendance of citizen
2 organization representatives to participate in the process
3 which affects them so importantly.

4 The organizations which participated were well
5 aware of this precedent having been established, and have
6 nothing but high praise to offer CONTU for having taken such
7 a step.

8 It would seem to PISA -- and perhaps this
9 should be viewed as one of its major recommendations for the
10 future -- that this activity, and the way in which it took
11 place, merits publicity, not only for the sake of what CONTU
12 did, but to act as an exemplar for other government agencies
13 and Commissions to emulate in the future. The facts of
14 fiscal life in most citizen, community and consumer organiza-
15 tions are such that participating in the democratic process --
16 as exemplified by various regulatory and legislative hearings --
17 is sadly often far beyond their means. Yet, as has been
18 suggested, regulations and legislation affects their very
19 being, their goals and objectives, and their way of doing
20 business. Indeed, one organization represented at the
21 Conferences -- an entity whose purpose is to share information
22 with other non-profit organizations -- would be so gravely
23 affected were non-profit organizations to have to pay
24 copyright fees for photocopying material to be retransmitted
25 to other non-profits, that it would have to cease its

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 existence. In a society where information is increasingly
2 a power; where citizens and consumers need information not
3 only as part of their working life but for their very
4 survival as individuals, the ripple effect of such an organi-
5 zation closing its doors could, since it serves the under-
6 privileged essentially, be not only of serious consequence
7 to its organizational constituency but of serious consequence
8 to a portion of society, itself.

9 PISA is somewhat at a disadvantage in the prepara-
10 tion of this report, and would like to be candid about the
11 reasons for it. The PIE-C document which, in various stages
12 of draft, the Conferences had considered on two separate
13 occasions and on which PISA is to comment in its current
14 and final form, arrived only the day before this was being
15 written. This is by no means to fault PIE-C; it was a
16 function of the mal-service of what is euphemistically
17 referred to as the U.S. Postal Service.

18 Further, only two days remained, then, between the
19 opportunity to examine that document in some depth; the
20 writing of these comments; and our appearance here today.

21 However, a great deal got said at the Conferences,
22 and in thoughtful papers that a number of participants
23 presented to them, and this paper will attempt to summarize
24 and analyze and comment upon those, as well as upon PIE-C
25 to the maximum extent that we can.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 The format of the Conferences was fairly simple.
2 CONTU, at the first one -- May 2nd -- welcomed the group.
3 PISA described the background -- CONTU's desire to elicit
4 the views of citizen and consumer organizations as to how
5 they would be affected by the new copyright law -- and
6 CONTU then spoke of the work of the Commission, the history
7 of copyright, the state of uncertainty that exists vis-a-vis
8 computers and copyright. There is attached to this statement
9 a copy of a transcript of both Conferences, which attempts to
10 recount in some depth what was said by whom, and when.
11 PIE-C presented an outline of its paper.

12 The same procedure was roughly followed at the
13 second -- June 13th -- Conference except that, by then,
14 papers had been received from five participants; a letter of
15 commentary had been received from a non-participant, in response
16 to an item in a newsletter published by one of the participants'
17 organizations; and these were read by their authors.

18 Another new element of the second Conference was
19 the presence of a representative, Mr. Ordovery, of an NYU
20 Working Group, and the distribution, for participant
21 consideration, of several additional documents. These were:
22 "Software Subcommittee Report & Additional Views" and the
23 "Data Base Subcommittee Report & Additional Views", both
24 CONTU documents.

25 Once the formal presentations had taken place, the

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 balance of both meeting days was, essentially, devoted to
2 questions and answers; and to discussions. One need only
3 glance at the "transcripts" to note that they were lively and
4 thoughtful, both in terms of questions and responses.
5 The word "transcript" appears in quotes, it should be noted,
6 because these were not verbatim; they were an attempt to
7 reconstruct, after the fact, based on extensive note-taking
8 and some use of the audio tapes that were made at the
9 Conferences.

10 There was a prevailing mood which soon became
11 apparent. The non-profit sector representatives present felt
12 a strong concern for any bottlenecks -- real or apparent --
13 which might obstruct what many felt to be a prime organiza-
14 tional objective: i.e., their function in passing information
15 which they felt to be of political and economic importance,
16 to their constituencies, and to the public-at-large. They
17 viewed themselves as having a key role in the transmission
18 belt that gets information to those who most need it --
19 generally that portion of society least well-equipped to get
20 it for itself: the consumer, the poor,
21 the disadvantaged, the isolated, the old, the young
22 and groups which find themselves excluded from main stream society because
23 of race, ethnic origin or sex.

23 There was some confusion about the role -- and it
24 was never resolved. At some points, the participants were
25 representing themselves as organizational entities whose

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 purpose was to encourage and promote the "free flow" of in-
2 formation to the public. Many felt that they were part of an
3 emerging "public interest" citizens movement which, of itself,
4 could be considered a separate "interest group", and which had
5 an enormous organizational stake of its own in the issues
6 being considered by CONTU. This represents, of course, a
7 considerable difference from PIE-C's stress on individual
8 consumers of goods and services.

9 This difference in perception made for some tension--
10 and for some confusion. There was a continuous pulling and
11 hauling--a virtual tug-of-war--between the participants as
12 organizational representatives, who had concerns about the
13 protection of the integrity of information they produced,
14 and the participants as, themselves: consumers.

15 Integrity was more a concern to the participants
16 as organizations than was revenue; that is to say, they cared
17 less about the possible re-sale -- except in one or two
18 cases -- of information they generated as providers of
19 informational services to others -- either individuals or
20 organizations -- than they cared about the information they
21 produced not being distorted, used out of context, or mis-
22 quoted. Almost needless to say, virtually every organization
23 represented had had bad experiences of the sort suggested
24 above. From a very practical point of view, such mis-
25 representation can cause economic problems. Either their

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PH:RE (202) 347-0224

1 organizational credibility is lowered -- and there may be some
2 cause and effect -- or their capacity to attract funding is
3 impaired.

4 Now these perceptual differences also caused
5 questions to be raised over the appropriateness of the
6 economic model being presented for participant consideration
7 by PIE-C. One participant raised the issue when he pointed
8 out that most of the organizations present were not interested
9 in economic efficiency as a criterion or rationale for their
10 existence. Public interest groups, many felt, did not
11 suit the economic model. They raised, time and again,
12 questions about what should be the basic purpose of copyright
13 and other forms of protection; whether they should not be
14 to encourage and promote the creation and dissemination
15 of information in a society in which, as previously noted,
16 information is becoming increasingly critical to the needs
17 of economic and political life. One participant -- as a
18 reflection, I suspect, of both the tensions and confusion --
19 exploded. She exploded over the issue of "why are we here?".
20 Her point is worth amplifying since it was, to some degree,
21 representative:

22 "PIE-C's report," she said, "is in a consumer-needs
23 vacuum. What are the uses we make of all this? This has
24 been an economics seminar. PIE-C and PISA should have con-
25 ducted two separate forums. There has been too little time to

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 reflect on consumer needs, comments, and recommendations.
2 There has been no chance for consensus on the reports we
3 submitted, for us to consider them as a body. We are being
4 asked to rubber-stamp a set of foregone conclusions."

5 In fairness to PIE-C, CONTU and PISA, it should be
6 pointed out -- and it was -- that this paper should represent
7 the point-of-view of participants to the extent that
8 the PIE-C final draft might not, and that the CONTU
9 process is by no means a closed one. Participants were encouraged
10 to react further, either as a result of the Conferences,
11 and any afterthoughts they produce, and to CONTU's contemplated
12 open hearings -- and to this paper, itself.

13 The tension may have been creative, though, since,
14 in the end, there was a surprising degree of unanimity, especially
15 in regard to the issues posed by photocopying.

16 All felt that no royalty should be allowed on
17 photocopying other than for resale -- a conclusion also
18 reached by, and explained in depth, in, the PIE-C report.

19 Indeed, the PIE-C final report aptly summarizes
20 many of the concerns expressed, " * * * attempts to retain
21 the current forms of proprietary rights could severely
22 retard progress in increasing information creation and dis-
23 semination."

24 The participants also endorsed the concept that
25 the "fair use" doctrine should be extended to cover all non-

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 commercial uses of photocopying of copyrighted works.

2 This finding of PIE-C's echoes the statement
3 previously referred to by the participant who pointed out
4 that non-profit organizations are generally not organized
5 for economic efficiency.

6 The participants also felt, and PIE-C concurs, that:
7 "Our judgement is that such exemption (from royalty payments)
8 would be socially desirable, and for administrative convenience
9 should be extended to all 501(c)(3) corporations." PISA is,
10 of course, in complete agreement with the concept, and would
11 only wish to raise the question here as to whether there are
12 not other 501 corporations, other non-profit organizations
13 who hold other than the (c)(3) designator, who might qualify
14 to be similarly exempt. That seems, at least, to be worth
15 further study.

16 In regard to the precedents cited as social policy
17 for such exemptions, it might only be noted that "non-profits"
18 do qualify for considerably cheaper bulk mail rates; some are
19 granted tax-exempt status; there are special "wire service"
20 rates for the Associated Press which holds a non-profit
21 charter.

22 One participant offered a recommendation in a
23 submitted paper which is worth noting here. She felt that,
24 in light of considerable discussion about monetary versus
25 psychic rewards for writers/creators of print material,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 especially as it pertains to copyright and photocopying,
2 the establishment of two classes of copyrights would allow
3 authors/creators to opt for that which best satisfies her/his
4 particular needs. She went on to suggest that "Class A"
5 copyrights would essentially be the same as copyrights now
6 in existence. It would provide a limited monopoly for the
7 creator, assuring both credit and royalty protection and
8 recognition. Copyright owners of "Class A" copyrights would
9 be able to litigate in infringement cases based on current
10 procedures, statutes and precedents.

11 "Class B" copyrights -- a new class -- would allow
12 reproduction and distribution on a not-for-sale basis.
13 Pirating for profit, of "class B" materials would be litigatable;
14 as would reproduction and dissemination without author
15 credit. This would ensure psychic rewards, but would provide
16 for widespread distribution. And she did mention a fee
17 structure for these two classes of copyrights.

18 Another participant wrote at length about the needs,
19 of the public interest community, for copyright protection.
20 Her rationale -- and virtually all of the Conference parti-
21 cipants seemed to share it -- was to the effect that: "Both
22 public interest groups and individuals need, and will continue
23 to need, regardless of technology, copyright protection for
24 a variety of purposes.
25

(1) Prevent theft of an idea without compensation by a corporation or individual who markets it for profit;

(2) To insure against plagiarism of original concepts of works of art;

(3) To guarantee proper credit, citation and quotation when materials are re-used by others; i.e., legal recourse;

(4) To protect the accuracy and credibility of people whose ideas are recorded; a form of registration protection against suits for libel and slander.

PIE-C pointed out several other issues and questions. The Conference participants have been asked to react to the final report, so suffice it to say here that, in PISA's view, several of these will be received favorably, judging from what was said at the conferences. Others may not be. There will likely be some disagreement about the statement that, "It would appear to be undesirable to restrict copyright ownership only to individuals." At least one Conference participant felt strongly that this should be the case: copyrights should be so restricted to individuals only.

PISA feels virtually all participants would agree with the thought of further pursuing. The question of whether research and development funded by the federal government should be subject to copyrights assignable to private parties. This topic would require more analysis than was possible in our study.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1
2 If asked for a "sense of the meeting," PISA's
3 view is that most -- if not all -- of the participants would
4 not favor such assignment.

5 To make copyright holders effectively equal
6 under the law, some form of assistance to small business,
7 individual and non-profit copyright holders appears to be
8 highly desirable.

9 PISA feels all would agree.

10 The report goes on to say, "However, to determine
11 the appropriate form, and the practicality of any form, lies
12 beyond the scope of the study reported here." This is
13 certainly a fair statement. PISA would urge that this matter
14 be studied further; and in-depth.

15 While there was "creative tension" and some degree
16 of unanimity in the discussion of photocopying, little
17 consensus could be reached regarding computer copyrights.
18 There are several obvious reasons for this to have been the
19 case. Photocopying is ubiquitous in the non-profit world,
20 Computers, while proliferating, are still a large unknown
21 at most non-profit organizations. Among the organizations
22 represented, there was a general "awareness" of the potential
23 power of computer technology to manage information and to
24 be of value to their own operations. But there was, really,
25 no clear notion of what this will really mean; of what it

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

TELETYPE
FACSIMILE

1 will cost; and for what achieved effects. And, hence, there
2 was a considerable reluctance to say very much about what form
3 of protection should, or should not, apply at this point in
4 time.

5 Despite the lack of consensus, PISA feels that it,
6 and many of the participants, want to endorse PIE-C's
7 recommendation on software -- which is on page 13 of the
8 attached report -- and on computer data bases and computer-
9 created works -- pages 16 and 17.

10 Two letters were received: one prior to the
11 second Conference, and one subsequently -- from individuals
12 responding to information, about the first Conference, in a
13 newsletter published by one of the participants. A computer
14 engineer offered an approach similar to that proposed in
15 my reference to "A" and "B" copyrights. He felt that there
16 were two general classifications of software producers:

17 a) large companies who produce expensive software
18 to support large computers, and/or extensive systems. A lot
19 of time and manpower is invested here. This is a commercial
20 product.

21 b) individuals or institutions who may only
22 contribute occasional software designed for small computers;
23 i.e., home or hobbyist. Many small business and non-
24 commercial applications also fall into this category.

25 He then offered a series of rather ingenious suggestions

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 as to how to go about this, but the end line of what he had
2 to say, the bottom line, was:

3 "I believe that any regulations proposed should
4 work to maximize the availability of copyrightable software
5 to the general public. One never knows who's out there and
6 what contribution to society they could make--given the proper
7 set of circumstances. Writers must also be rewarded
8 and encouraged to produce. I don't think that availability
9 and reward are mutually exclusive."

10 PISA would agree with the above, and believes that
11 the Conference participants would, as well.

12 Another letter was received in response to that news-
13 letter item, and the author -- who was, again, an engineer --
14 expressed the view that, " * * * I believe that wide avail-
15 ability of software is the primary concern, and that protection
16 of rights and the acquiring of rewards be at the minimum --
17 to ensure sufficient motivation for talented people to produce
18 high quality work of general interest. I don't think
19 that the rate of increase of knowledge should be the over-
20 riding concern, but agree with Ithiel de Sola Pool that
21 the 'seed of diffusion' is what should be rewarded..
22 Society presently has immense amounts of useful knowledge
23 that are not well utilized; the problem seems to be getting
24 it to the right places."

25 This is something that has come up time and time

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 again at the conferences, where several people especially had
2 pointed out that the problem of copyright should be perceived
3 as one relating more to the distribution of information than
4 to its creation.

5 The sender of the letter also said, " * * * As
6 more and more of our knowledge that is vital for social
7 functioning (e.g., financial transactions, communications -
8 personal, governmental, corporate, etc. - recreation, education
9 etc.) is expressed as software, then the question of who
10 is creating it, who is disseminating it, who is using it and
11 for what purposes becomes very important. If this knowledge
12 is concentrated in few hands then we will have taken another
13 step in the direction of centralization of power and dependence
14 on massive interest. On the other hand, with appropriate
15 legislation that favors smaller social units, there is a
16 chance, albeit a very slim one, that the trend can be
17 reversed slightly."

18 We have underlined that section. The statement echoes
19 a brisk exchange at the Conference between some who favored
20 the creation of a huge and probably governmental data bank,
21 a software version perhaps of the Library of Congress;
22 and those who greatly feared putting that kind of concentra-
23 tion of data power in the hands of government.

24 The sender of the letter also offered what he
25 called "scale-dependent protection", where he indicated that

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 there could be some upper limits on the number of patents;
2 the time limit could decrease; the tax on royalties could
3 increase, and so on. He pointed out that there were already
4 a good number of precedents for making the registration
5 procedure and cost depend on size; e.g., income tax, building
6 permits, licensing for vehicles, day-care centers, etc.

7 He also made the point--and I think it is worth
8 pointing out here: "Restrictions of small copying is almost
9 unenforceable if it is an infringement, and is probably a
10 healthy thing, anyway, and so should not be made an offense."
11 as
12 And we would venture to point out that, /small computers and
13 home computer utilization and the increase of message net-
14 works among computer hobbyists proliferates, it would almost
15 be impossible to enforce the type of situation in which
16 a piece of copyrightable material is put on a CRT Tube trans-
17 mitted to another computer, read off by someone later on, and
18 then taken off the tape--once it has achieved its value.

19 We quoted this man's testimony because he expressed
20 an approach not heard at the Conference; and I wish it had been,
21 because it might have benefitted -- in terms of sharpening
22 the focus of what might be characterized as a "soft" dis-
23 cussion, due primarily to the lack of experience with the
24 technology involved. Our hope is that when this paper is
25 distributed to the participants, they will react to the
approach.

1 The question of "enforcement" was raised, peri-
2 pherally, in that letter. The question of "who should
3 qualify" was touched on earlier to some extent, when PISA
4 endorsed the PIE-C recommendation that 501(c)(3) corporations
5 be granted exemption from copyright royalties. There was,
6 though, a decided difference between the PIE-C approach,
7 which dealt with this question in terms of whether or not
8 there was effective competition in the marketplace :
9 where there wasn't, no form of protection, copyright or
10 other, should be granted; where there was; copyright should
11 be made available. Others argued strongly that only
12 individuals --not corporations--should be permitted copyright
13 protection.

14 PIE-C did endorse providing assistance to small
15 business, individual and non-profit copyright holders, but
16 indicated that how to achieve this was beyond the scope of the
17 present study. However, Ferguson, in the transcript of the
18 May 2 Conference, did say, "Needed is a federal agency to
19 litigate on behalf of small holders."

20 PISA has already made its view known that this
21 matter should be pursued; a view that is strengthened
22 in the comments offered by at least one of the participants.

23 The question of granting protection to private
24 parties whose information is obtained by federal government
25 research and development was seen by PIE-C as needing more

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 analysis. PISA feels most participants -- and PISA --
2 would favor not assigning copyrights to private parties
3 for work done under federal R & D auspices.

4 One of the speakers, representing the National
5 Association of Community Health Centers, spoke rather
6 eloquently on the effect that this might have on the work
7 that they do.

8 PIE-C's final question in the Executive Summary
9 to its report, was: "Will technology overtake us?"

10 Technological prediction is a risky business;
11 its history is strewn with the thoughts of those who felt
12 that airplanes would never be of value in war, that battle-
13 ships were unsinkable, that rockets were children's toys,
14 that the automobile would never replace the horse.

15 PIE-C points out that, "Our recommendations pertain
16 only to the present and clearly visible applications of
17 existing technology."

18 It goes on to say, "Further, the 1976 Act provides
19 for the review of the technology of photocopying at five year
20 intervals. We recommend not only that the review be extended
21 to other computer-based information but that there be a
22 sunset provision: unless existing protection in both photo-
23 copying and computer-based information is justified every five
24 years, it should be discontinued."

25 PISA strongly endorses this recommendation, and
strongly believes all Conference participants and others

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 in the non-profit sector would do so, as well.

2 During the course of, especially, the second
3 Conference, a number of suggestions were made regarding
4 the need for further knowledge and research. These are
5 noted in the transcript, but not taken specific note of, here,
6 since all of them seem to be not necessary in light of the
7 overreaching recommendation to CONTU that non-profits (i.e.
8 501(c)(3)'s,--and it has been recommended that perhaps others
9 qualify)--not be charged copyright royalties. If this
10 recommendation stands, and is implemented, it is not seen
11 as of value to survey the non-profits' volume and manner
12 of use of copyrighted works. Should the recommendation not
13 be accepted, this research suggestion and others
14 to which similar criteria would apply need to be reexamined.

15 The Conference could be faulted on the question
16 of how "representative" were the participants. That is,
17 of course, a potential flaw in any attempt to generalize
18 knowledge through the mechanism of holding a Conference. If
19 there are serious doubts -- and we have none -- on the part of
20 CONTU or on the part of others to whom the findings and
21 recommendations may be displeasing, the obvious next step
22 would be to hold more -- perhaps many more -- of the same;
23 or to combine the Conference approach -- which, at least,
24 did allow for explanations and dialogue -- with a massive
25 questionnaire. Let there be no doubt, though: it would be

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 massive; there are known to be some 6,000,000 non-profit
2 organizations in the United States. While statistical
3 sampling techniques are quite sophisticated -- in terms of
4 arriving at a high degree of generalization from a
5 relatively small sample -- we must note here that we are
6 dealing with immensely complex matters--from the point of view
7 of comprehensibility. The initial PIE-C document received
8 immense impetus from the fact that Dr. Ferguson was able to
9 explain it, to answer questions about it; and that CONTU
10 staff were able to do the same. PISA-- and we are sure
11 the participants would concur -- are in his, or their -- debt.

12 Obviously, there is more to be done. CONTU will
13 hold its hearings; the Conference participants will undoubtedly
14 participate -- and urge others to participate --and those, as
15 well, will, undoubtedly, file further comments to the
16 PIE-C final report and to this effort. PISA, to the extent
17 of its ability, intends to do the same. We feel -- to return
18 to the beginning of this paper --privileged to have been part
19 of what can well be characterized as a ground-breaking effort.
20 We intend to do our utmost to urge other Commissions and
21 federal agencies to follow CONTU's example so that the
22 ability to pay need not be the criterion for the ability to
23 participate in the legislative and regulatory process.

24 Thank you, sir.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 JUDGE FULD: I am sure there are questions from the
2 Commission. We will recess for a few minutes, at this time.

3 (Brief recess)

4 JUDGE FULD: The meeting will come to order.

5 COMMISSIONER LACY: I thought the study was interesting
6 but just for that reason, I have a number of questions and
7 comments about it. A number of terms are used which have
8 various meanings to various people -- some of them rather
9 emotion-laden. I suspect, Dr. Ferguson, you and I agree
10 on what the words mean in this context; but to make them
11 explicit, I wonder whether we could deal with some of them.

12 You suggested, for example, that the consumer
13 was closely compatible with public interest, generally, and,
14 certainly, we would all agree with that. But you suggested
15 that there might be exceptions to the case -- with worker
16 interest, for example.

17 I suppose we would all agree with you, and would
18 define consumer interest very narrowly as being able to get
19 goods and services of the highest quality at the cheapest
20 price. For example, labor legislation, child labor laws,
21 and wage laws are anti-consumer -- to a degree.

22 I suggest the possibility that in the case of
23 information areas in which consumer interests are narrowly-defined as
24 being the cheapest material at the highest quality, these interests may not
25 be consistent with the long range public interest.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

For example, surely the Government Printing Office is a great service to consumers in the sense that -- being heavily subsidized by tax funds--it is able to provide material substantially cheaper than comparable materials from private sources. And many scientific journals of the sort that are most frequently photocopied, could be published with various forms of Federal subsidy.

To the extent that one creates a situation in which it is impossible for a publisher to recover his costs from the purchases of consumer-buyers of his product, and has to rely on federal subsidy, you create a trend toward a situation in which only that which the federal government approves of can be published.

If it were the case, for example, that scientific journal publishing was almost entirely-consistently-of federally published and subsidized material, it would do away with the photocopying issue, because the government would probably dedicate -- by public domain -- free copies, and would probably have lower subscription rates than privately published scientific and technical journals, at, hence, a consumer saving.

At the same time, you might have a situation where

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 there would be no strong criticism of government policy,
2 let's say, on Nuclear Energy. There is public interest in
3 the preservation of consumer--rather than governmentally
4 supported - - enterprises.

5 I don't think there is any difference except
6 to say that consumer interest is not necessarily, overall,
7 --

8 MR. FERGUSON: I think there is a difference in
9 emphasis, that we might want to come back to, after you finish--

10 COMMISSIONER LACY: Further, it is that exclusive use by an
11 author of his own works -- which was conveyed by the copy-
12 right law -- that is referred to as "monopoly."

13 I think we all ought to recognize--and I am sure
14 you do, when we are talking of monopoly and copyright--we
15 are talking about monopoly, by the person, of his own works --
16 the kind of monopoly, for example, that a farmer has over
17 what he grows on his farm, or a cabinet maker has over what
18 he does; or that an economic consultant has over his
19 consulting, or that a doctor has over his medical practice.
20 We are not talking about the elimination of competition.

21 We are talking about a monopoly where a novelist
22 writes a novel. He has a monopoly over that novel because he
23 wrote it under copyright--but no monopoly over all novels.
24 He publishes in competition with several thousand other novels
25 at the same time.

221-222
Preceding page blank

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 He doesn't, even under copyright, have a monopoly
2 over the ideas that he thought of and put in the novel; or
3 the information that he researched, and put into the book
4 he wrote. He has monopoly only over his own work.

5 Could we agree on that?

6 DR. FERGUSON: Well --

7 COMMISSIONER LACY: It is a monopoly that he can assign
8 to someone else.

9 DR. FERGUSON: It is an assignable monopoly,
10 obviously, but I think that the analogy with the wheat
11 farmer is kind of strained.

12 COMMISSIONER LACY: Only because all wheat farmers produce
13 about the same quality of wheat. Novelists write novels
14 of different quality; but otherwise it is the same.

15 DR. FERGUSON: Well, that is throwing the baby
16 out with the bath water, isn't it?

COMMISSIONER LACY: No. Because, as a matter of

18 fact, most wheat farmers are in a monopoly situation,
19 whereas the great majority of novelists publish at a loss
20 because the competition in the marketplace is so intense.

21 DR. FERGUSON: Let me go back to what I think
22 is a significant distinction.

23 A monopoly over something for which there are
24 virtually identical substitutes is no monopoly. And so, to
25 say that a wheat farmer has a "monopoly" is not, in the economic

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 sense---

2 COMMISSIONER LACY: A doctor has a monopoly to do heart
3 operations. Obviously, he has a monopoly over his operations.

4 It is essentially the same thing.

5 DR. FERGUSON: The basic question, I think, is if
6 a copyright is worth a lot, then -- put the other way
7 around -- unless the item in question is, in fact,
significantly distinct from the best available substitutes,

9 the copyright is not of any substantial value. So,
10 whereas I am in complete accord with your basic proposition
11 that there is an important distinction between a monopoly
12 over an item -- we make this distinction in the text --
13 and the monopoly of a market. There is such a distinction --
14 and when we refer to restrictions on entry, or the lack of
15 restrictions on entry, we are talking about the existence
16 or the non-existence of monopoly in the market -- not on the
17 particular item.

18 Nevertheless, a monopoly on a particular item
19 can be of substantial value and, if it were not, there
20 would not be the interest that there is in copyrights.

21 COMMISSIONER Just so. But the value of an author
22 being able to have the exclusive use of his works, like the
23 value to a doctor over his having the exclusive capacity to
24 offer his services, rests, not in the fact that he can
25 eliminate competition; but that he offers something better than

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 the competition.

2 As you say; what makes the copyright valuable to
3 an author, though, is the superiority of his product over
4 the other thing -- not the limiting of competition, but
5 his superiority over competition.

6 I think we can readily understand each other on
7 that.

8 I wonder, on some of the statements, if they were
9 really meant literally as they were said. You suggested
10 that there should be no royalty payments; and I assume no
11 permission of the proprietor required for any photocopying
12 not done for resale.

13 For example, suppose a professor at the Dade
14 Community College in Florida teaches a group of people of
15 primarily Hispanic background, and -- finding the available
16 text books unsatisfactory to them -- without the permission
17 of the authors involved, reproduces 500 copies each of a
18 number of short stories that deal with Hispanic subjects
19 and puts them into a text book, which he then distributes
20 free to members of his class.

21 Do you feel that is proper?

22 DR. FERGUSON: It is my understanding that, already,
23 face-to-face teaching is excused.

24 COMMISSIONER LACY: No. That is not what teachers mean by
25 face-to-face teaching, at all.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHICHE (202) 347-0224

1 DR. FERGUSON: It is not?

2 COMMISSIONER LACY: No, it is not. They are talking about the
3 teacher who comes in and sees something in the New York Times
4 that morning, and reproduces it.

5 I am talking about something that is done weeks
6 ahead--for the whole class.

7 DR. FERGUSON: I did not know the time and the
8 place was that important. I don't know the definition of
9 face-to-face teaching. I read it in a fairly generic way.

10 COMMISSIONER LACY: This is something that you recommend
11 should be possible for a college to do?

12 DR. FERGUSON: Well, I think the question is: What
13 do you have to pay to provide that degree of protection?

14 Where do you draw the line?

15 If the particular kind of example you cite is
16 unique, obviously, there is not much harm.

17 COMMISSIONER LACY: It is not unique. It is common
18 practice.

19 DR. FERGUSON: If it is widespread, then it becomes
20 a problem; and it should be coped with when it becomes a serious
21 problem.

22 Where would you draw the line if you don't draw it
23 at re-sale?

24 That seems to me to be the critical question.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER LACY: What you seem to be suggesting is that
2 possibly a line ought to be drawn short of re-sale?

3 DR. FERGUSON: No. I am saying that it seems to me
4 to be practical and relatively easy to enforce, if you deal
5 with re-sale.

6 COMMISSIONER LACY: That is, you think there should be a
7 difference if you charge the students \$2.50 for each of
8 these books?

9 DR. FERGUSON: Yes. I think so.

10 COMMISSIONER LACY: Let me run through, for a few minutes,
11 the second point.

12 Suppose you have a community action organization
13 that feels that one of the real needs of the group that it
14 is working with -- being consumers - isconsumer information, and the
15 quality of products it buys. Suppose this organization decides that
16 the way to fill that need would be to reproduce, for each of its members--
17 there are thirty or forty members in the group--Consumers' Union
18 Reports, and distribute it free, without the permission
19 of the Consumers' Union.

20 Do you recommend that as an appropriate action?

21 DR. FERGUSON: This was a public interest group?

22 COMMISSIONER LACY: Yes. Dealing with a group of impoverished
23 clients, and they feel that those clients need better consumer
24 information. It decided that the way to do that would be
25 to reproduce at least thirty or forty copies of Consumers'

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Union Reports, rather than subscribe to the journal, and
2 give it to each of them.

3 DR. FERGUSON: That would fall within the concept
4 of fair use that we are talking about, and the reason why I
5 think that makes sense is two-fold. Three-fold, really.

6 One is that there is clearly the alternative of
7 simply referring these impoverished people to the local
8 library, where they can read Consumers' Reports, or the
9 Annual Guides, at exactly the same contribution to Consumers'
10 Union as in the photocopying case.

11 Secondly: If they are, in fact, an impoverished
12 clientele, the expected loss of revenues to Consumers' Union
13 I would think would be rather small.

14 COMMISSIONER LACY: Not to their subscription, but there
15 might be a loss as compared with the organization using the
16 alternative method of subscribing to the Consumers'
17 Union.

18 DR. FERGUSON: These questions, of course, come
19 down to quantities.

20 COMMISSIONER LACY: Do they? That is exactly the point I
21 am trying to make. You are saying that all photocopying
22 that is not for re-sale should be free. I really don't
23 think you meant that.

24 DR. FERGUSON: I did mean that. That does not mean
25 that I am not in error.

1104 GARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD MAKING PROFESSIONALS

PHONE (202) 347-0224

1 I have mentioned erroneous things before.

2 As a matter of fact, I don't think we are in error
3 on this.

4 COMMISSIONER LACY: Suppose it were the Retired Teachers
5 Association with 100,000 members which decided to reproduce
6 the Consumers' Union Report and give it to the members free.

7 MR. BRESLOW: May I respond?

8 COMMISSIONER LACY: Yes.

9 MR. BRESLOW: It seems to me if we force the students
10 who are to read the short story,--or the teachers or people
11 that are to read the Consumers' Union Reports--to come into
12 the library, one at a time, to check out the short story;
13 or if they have the convenience of reading it at their home,
14 or at their desk, the publisher is in, essentially, the
15 same position.

16 In one case, the user would come to the library,
17 borrow the short story, sit down there, and read it. The
18 publisher would receive no revenue from it. In any case,
19 if the person were to take the photocopy home, sit down
20 and read it, the publisher would receive no revenues from
21 it. The essential difference is that, in the latter case,
22 the person reading the short story finds it a lot more
23 convenient than if he had to stand in line behind 499 people
24 to get the short story.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER LACY: The alternative would be to reproduce
2 the story at a fairly nominal sum.

3 MR. COWLAN: I just want to add one thing to
4 Mr. Lacy's last comments.

5 Some of the organizations which do disseminate
6 copyright material do seek permission, for whatever set
7 of reasons. It is a sad fact, of non-profit organizational
8 life, that they rarely get an answer.

9 COMMISSIONER LACY: I think that is probably not true. I
10 suspect that, in a number of cases, they do get an answer,
11 rather than that they don't, in the majority of cases. Large
12 organizations get hundreds of such requests.

13 MR. COWLAN: The answers may come too late, and
14 and frequently do.

15 DR. FERGUSON: May I take one more crack at
16 answering that one?

17 I think it is a non-trivial question, and it seems
18 to me that you are talking about the possibility of some
19 kind of arbitrary cut-off on the number of not-for-re-sale
20 copies. One might think of such a number. And you are also
21 talking about the case where permission is readily granted.

22 Clearly, if it is readily granted -- i.e., granted
23 at little or no royalty -- there is no significant economic
24 problem involved. The economics are essentially the same --
25 whether permission is granted, or not.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Now, we are talking about the charging of royalties.
2 We have not talked, at all, about other aspects of copyright
3 protection. Whatever right the copyright gives to an
4 author, or the copyright holder, for accurate reproduction,
5 accurate sourcing -- citations -- we have not addressed
6 that at all.

7 COMMISSIONER HERSEY: But you do, implicitly -- you do
8 recommend opening up fair use to all cases except copying
9 for resale. I am sorry to intervene but this is, in
10 essence, for the author, because the issue of integrity
11 of the text -- the need for some control over how material
12 may be used -- is very important.

13 The fair-use doctrine was originated to allow
14 reviewers to use a few sentences to make a point; or scholars
15 to use examples, and so on. It has been eroded over the
16 years, and extensively, in this version of the Copyright
17 Act. But authors would very strongly oppose-as being an
18 erosion-what you are recommending. I believe that, in-
19 directly, this is an argument in favor of something which
20 you have proposed. That is, the mechanism of the clearing
21 house because--speaking, for example, to the need for
22 exemption for public interest groups--I think it's conceivable
23 that a clearing house would be able to regularize that to
24 recommend to all creators that they follow certain formulas.

25 We are in the process, now, of setting up such a

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 clearinghouse for television,--making it possible for public
2 television to use literary material at substantially lower
3 rates than they would in the open market; get quick per-
4 missions by telephone; and I think that the A.A.P. clearing-
5 house does suggest a kind of model that might make possible
6 quick permissions and provisions for low royalties,--or no
7 royalties, in cases where that seems to be in the public
8 interest.

9 But the issue of one to maintain some control
10 over the integrity of the material is of the essence, for
11 authors.

12 One of the difficulties that I find with the
13 PIE-C report as a whole is one which the PIE-C people
14 also found. That is insistence on the efficiency of
15 economies as the overriding consideration. It has to be
16 tempered with the notion that quality of life and other
17 elements may be, also, of very great public interest.

18 Indirectly, there may be a public interest in
19 making sure that authors do have control over the integrity
20 of their material.

21 DR. FERGUSON: May I react to that?

22 COMMISSIONER HERSEY: Yes.

23 DR. FERGUSON: I think part of the problem may be
24 that we have misused the phrase "fair use".
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 We have made an unfair use of the phrase.

2 When we say that the concept of the doctrine should
3 be extended to embrace reproduction not for re-sale, let
4 me say more precisely what we mean; and you can tell me whether
5 that means "fair use".

6 We mean that no royalty should be charged.

7 All other aspects of copyright protection, as far
8 as we are concerned, should remain intact.

9 COMMISSIONER LACY: Does that mean that you should have the
10 author's permission before you reproduce it?

11 COMMISSIONER HERSEY: That is the essential question.

12 COMMISSIONER LACY: "Fair use" opens that up.

13 COMMISSIONER HERSEY: Yes.

14 DR. FERGUSON: I think we have not thought speci-
15 fically of that. It would seem to me that if there were a
16 requirement of permission, as distinct from some more general
17 statement that reproduction has to be accurate with proper
18 attribution and so on which might be possible to do in
19 the Statute, or through judicial process, or regulatory
20 process; if the requirements for permission were retained,
21 it would seem to me to cover the point that Bert raised,
22 with which Mr. Lacy disagreed: where permission is not
23 forthcoming, it should be essentially negative. If, within
24 thirty days, or some such time, permission is not denied,
25 then it is implicitly granted.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 It is impossible to overestimate, I think,
2 the importance of making material readily available.

3 COMMISSIONER. WEDGEWORTH: There are a couple of points
4 I wanted to emphasize, just to be sure that I was under-
5 standing what was being said, and if that is correct, I
6 wanted to add emphasis to them.

7 The two most significant lines of argument that
8 I see emerging from your work bear upon the notion of the
9 consequences of monopolistic practices, and the notion of the
10 tendency to disregard the added value to the copyrighted
11 product that comes from the distribution function of the
12 photocopying service or, perhaps, the library providing direct
13 service to the consumer.

14 I want to be sure that, first of all, with regard
15 to monopolistic practice, focussing on the market approach
16 rather than the individual product, as was discussed a
17 few minutes ago: Would you agree that given your assumption
18 of inequitable distribution of wealth and, therefore, an
19 inequitable distribution of publishing capability in the
20 information industry, that your analogies would tend to
21 show that the distortion of revenues recovered from one
22 or more types of royalty schemes applied to photocopying,
23 could result in at least one of two outcomes.

24 One would be excessive profits for some producers--
25 with the resulting lack of accessibility to a broader

1 variety of works from a number of producers and/or that
2 you might have, at the same time, a dramatic increase in
3 the number of works being available from certain producers
4 that would be above that which you might normally expect
5 resulting directly from demand?

6 DR. FERGUSON: Let me pick up those three things,
7 as I understand them, in sequence.

8 Let me paraphrase and see if I get the essence.

9 Would the imposition of royalties lead to the
10 possibility or the reality of excessive profits associated
11 with the reduction in the availability of existing works
12 to customers and consumers?

13 COMMISSIONER WEDGEWORTH: The variety.

14 DR. FERGUSON: And an increase in the number of
15 works available.

16 Those are the three?

17 COMMISSIONER WEDGEWORTH: Yes, but not necessarily an
18 increase in the number of works that would have a manifest
19 demand.

20 DR. FERGUSON: Let me try to pick them up in
21 sequence.

22 We do point out that the introduction of a royalty
23 system for photocopying would bring about -- would be
24 expected to bring about -- windfall profits to the existing
25 publishers of existing photocopied journals.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 JUDGE FULD: You mean copyrighted journals?

2 DR. FERGUSON: Yes. Copyrighted journals. Right:

3 Those windfall profits under conditions of
4 competition in Mr. Lacy's sense; where there is free entry
5 into the market -- easy entry into the market -- those
6 windfall profits would gradually be eroded away on a current
7 basis -- on a current windfall basis. In the third year,
8 or something of that sort, the windfall profits should be
9 eroded away.

10 They would be eroded away--if they are eroded away
11 at all--as a consequence of the stimulus to produce additional
12 works that the royalties constitute.

13 Now, there would be some permanent windfall profits
14 on works that were in existence before the introduction of
15 the extension of the royalty system.

16 COMMISSIONER WEDGEWORTH: I understand that. I guess
17 I am adding another complexity to the argument in addition
18 to the windfall profits that would normally accrue from
19 the archival products already available.

20 DR. FERGUSON: And, also, new products by the existing
21 firms during a period of transition.

22 COMMISSIONER WEDGEWORTH: That is really what I was concentratin
23 on with my question: The new products. If you assume an
24 inequitable distribution of the capability of making new
25 products available, this means that there will be an added

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 stimulus to make many new products available, by those with
2 the capability, and, therefore, a resulting lack of variety
3 by the number of producers who are able to enter the field.

4 DR. FERGUSON: I think that is not likely in
5 the relevant area; that the price of admission in the
6 technical journal market seems to be very low.

7 COMMISSIONER WEDGEWORTH: So the bottom of the curve
8 doesn't make any difference?

9 DR. FERGUSON: As indicated by the fact that there
10 are a number of journals that seem to be surviving quite nicely
11 at one or two thousand subscriptions a year. That does not
12 require massive amounts of capital, since the authors do not
13 get any compensation. Now, again, we are in the data-less
14 world, but that appears to be the indication.

15 COMMISSIONER WEDGEWORTH: So the consequence of the argument
16 would be you would have the great stimulus for new products,
17 and the resulting erosion of the profits from those products
18 by the additional stimulus and, at the same time, the
19 marginal products could continue to be produced.

20 DR. FERGUSON: The existing marginal products
21 would tend to remain viable. Yes.

22 MR. HAVERKAMP: Let me carry that one step further.

23 The windfall profits are nothing to sneeze at.
24 The existing journals have been priced with the expecta-
25 tion of no royalty charge for photocopying. Publishers,

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 as I understand it, have not had any inkling that they might
2 be paid a royalty fee until very recently. So they
3 have priced their journals -- and they have priced their
4 journals higher to people, to users, who might make multiple
5 use of the journal, such as libraries and institutions,
6 than they have to individual subscribers, through price
7 discrimination; sometimes charging two times the fee to
8 institutions that they do to individuals; and, sometimes, higher
9 for non-profit journals.

10 COMMISSIONER PERLE: Do you have the source of that
11 statement?

12 MR. HAVERKAMP: Yes. Well, we have to go to the
13 U.S. Postal Service for that.

14 The "two-times price
15 discrimination provision" is all that private institutions
16 are permitted as a rule of the Postal Service.

17 COMMISSIONER PERLE: I would like more specifics on that.

18 I am fairly familiar with the Postal Service.

19 I want you to tell me the source of what I think
20 is an irresponsible statement.

21 MR. HAVERKAMP: I will do that in my report.

22 COMMISSIONER PERLE: I would like to know your source of
23 the so-called price discrimination--where the publishers of
24 small journals are charging more to one category of subscriber
25 than they are to the other.

July 20, 1977

The following extract from the U.S. Postal Service regulations describes the limitations on subscription price discrimination for commercial publishers wishing to qualify for second-class mailing privileges:

"132.228 Nominal Rate Publications

Publications designed primarily for circulation at nominal rates may not qualify for second-class privileges. Persons whose subscriptions are obtained at a nominal rate shall not be included as a part of the legitimate list of subscribers required by 132.225. Copies sent in fulfillment of subscriptions obtained at a nominal rate must be charged with postage at the transient rate (see 132.13). Nominal rate subscriptions include those which are sold:

- a. At a token subscription price that is so low that it cannot be considered a material consideration.
- b. At a reduction to the subscriber, under a premium offer or any other arrangements of more than 50 percent of the amount charged at the basic annual rate for a subscription which entitles the subscriber to receive one copy of each issue published during the subscription period. The value of a premium is considered to be its actual cost to the publisher, the recognized retail value, or the represented value, whichever is highest."

(underlining added)

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER DIX: That is very easy to document.

2 You can get the subscription list of any library, and you can
3 run down, very quickly, a number of journals for which the
4 publishers are charging more to libraries than they are to
5 individuals.

6 COMMISSIONER KARPATKIN: That is common with news letters.

7 COMMISSIONER PERLE: I am thinking as a trade publisher.

8 Forgive me.

9 MR. HAVERKAMP: You can charge quite a bit more
10 to institutions than you do to individuals. This might
11 increase your subscriptions.

12 Let me finish up on this real quickly.

13 As a result, this is very much analogous, I think,
14 to a case where General Motors is able to charge a mileage
15 fee to people that have already bought their automobiles.

16 This would be the provision of any royalty charge that
17 charges for journals that are already published, that have
18 been priced with the expectation that there would not be a
19 royalty charge. I don't know if you follow me on that.

20
21
22 COMMISSIONER WEDGEWORTH: I think it is fairly understandable.

23 The other point I wanted to emphasize -- which
24 you sort of toss in, but don't go on to give a further
25 explanation -- is the matter of the added value provided by

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 the photocopying service, or whoever provides the distributing
2 function, and I think that that probably deserves more
3 emphasis than has been given, because what your analysis
4 clearly tends to indicate is that revenues will be taken
5 away from that function and returned and, therefore, would
6 tend to inhibit the ability to perform that function.

7 Is that accurate?

8 DR. FERGUSON: If I understand what you mean by
9 "added value", I think I agree with you. Let me state it,
10 and let me paraphrase it, and see whether we agree.

11 There seems to be some indication -- again,
12 Line and Wood have a useful statement on it -- that
13 photo reproduction of existing especially small, new
14 journals, is, itself, a useful stimulus to the sale of
15 those journals. That is Point No. 1.

16 Point No. 2: It is really the same point but said
17 in a slightly different way.

18 The authors, in particular, get a substantial
19 benefit out of any dissemination of their work. Their
20 reputation is enhanced, so that rather than their suffering
21 -- or let me say, rather than, or in addition to, any
22 suffering they may endure as a consequence of free photo-
23 reproduction, they get a benefit. So both the author --
24 especially the author of technical pieces -- and apparently
25 at least some of the publishers of especially small and new

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 journals, get a degree of benefit out of free photo-
2 copying.

3 COMMISSIONER LACY: Bob, are you through?

4 COMMISSIONER WEDGEWORTH: Yes. Yes.

5 COMMISSIONER LACY: I will make this as brief as possible.

6 When we were talking about terms,--when one speaks
7 of consumer and producer,--the image that comes to mind is
8 of the consumer as an individual -- whereas the producer
9 is likely to be a large corporation.

10 Of course, in this case, this is frequently
11 reversed. The producers of the copyrighted material in
12 the literary field are, mostly, individual authors, and
13 even in fields like computer software, the ones that are
14 entering the market are likely to be small partnerships of
15 very small firms. It is principally the consumers who do
16 the bulk of the photocopying and purchasers of computer programs
17 tend to be quite large corporations -- almost a 180 degree
18 reverse of the normal image of consumer and producer.

19 In view of that, I wonder, again, if what was
20 really intended was that photocopying not for re-sale
21 should be subject to no requirements of royalty.

22 Let me give you a concrete example:

23 The New School for Social Research -- not a notably
24 wealthy institution -- has just started a publication
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 in New York, and uses a lot of descriptive material of the
2 financial situation in New York City, in trying to provide
3 objective reports on a very valuable form of research.

4 They are having to charge a relatively high
5 subscription cost; \$450.00 for twenty-four editions.
6 It is very expensive to produce.

7 The twenty-four issues for \$450.00 could probably
8 be copyrighted for five dollars.

9 If one took literally what you are saying about
10 being able to reproduce photocopying as long as it is not
11 for re-sale, the Chase Manhattan Bank would be in a position
12 to reproduce a hundred copies for all of its staff.

13 I take it that you don't really mean that that
14 should apply.

15 DR. COWLAN: I take it that the Chase Manhattan
16 Bank is hardly a 501(c)(3) case.

17 COMMISSIONER LACY: No. I am talking about "re-sale." I will
18 come back to non-profit in a minute.

19 DR. FERGUSON: That would certainly seem to be an
20 abuse of the system, as the system is set up.

21 COMMISSIONER LACY: Let's come back to "non-profit."

22 DR. FERGUSON: Let me stick to this one for a
23 moment, if I may. I keep getting concerned about your --
24 what seem to be -- tales of the distributions.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 The question is, essentially, how many instances
2 are there likely to be of this sort of thing?

3 COMMISSIONER LACY: A great many. Numerous.

4 DR. FERGUSON: There are certain problems in
5 certain areas, but the question is: What is the cost of
6 eliminating that abuse?

7 COMMISSIONER LACY: It is not a question of eliminating
8 anything. Let me point out one thing in your circular
9 argument. You started out by saying -- and I agree with
10 you on this -- that the kind of photocopying that is done
11 today by libraries, generally speaking, is mostly lawful
12 within the present law. I think the great majority of
13 libraries' photocopying is fair use -- or else, would be
14 photocopying justifiable under 108(c).

15 You are saying there is no evidence it does any
16 harm.

17 I probably agree with that. It probably does no
18 harm. So you are saying that the lawful photocopying now
19 going on does no harm; therefore, we should change the law
20 and permit a great deal of photocopying that would now be
21 unlawful. You are not talking about putting in new re-
22 strictions. You are talking about saying: One can photocopy
23 in any quantity as long as it is not for re-sale -- which is
24 certainly not the present law.

25 It would require a major amendment to the law to.

1 You are saying any non-profit organization ought
2 to be subject to, essentially, no limitation.

3 DR. FERGUSON: I said 501(c)(3).

4 COMMISSIONER LACY: Let me illustrate this point.

5 Many products are sold only to non-profit
6 organizations. That is their only market. Hundreds of
7 millions of dollars worth of material a year are produced
8 for no market except for schools and libraries.

9 The State of California normally -- or more
10 frequently -- use text books/^{for}which, instead of buying them
11 from the publisher, it enters into a contract with the
12 publisher under which it obtains permission to reproduce these
13 copies, and pays a royalty to the publisher.

14 Now, you are not suggesting that the State of
15 California should be able to do that without paying a
16 royalty?

17 DR. FERGUSON: We said specifically 501(c)(3)'s,
18 and left open the question of whether someone else wanted
19 to draw the line somewhere else.

20 COMMISSIONER LACY: There is nothing in the present law
21 that gives a 501(c)(3) organization any freedom that
22 anybody else does not have.

23 DR. FERGUSON: That is not true. We are exempt
24 from local sales tax.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER LACY: I am talking about copyrights.

2 You are suggesting an amendment of the copyright law
3 to suggest a whole new branch of free copying; and your
4 justification is that the present photocopying done within
5 the law does not do any harm.

6 DR. FERGUSON: That is not the justification.

7 I thought I was fairly careful in spelling out
8 the justification.

9 We are, in fact, suggesting a change in the law.
10 And the justification is a three fold one of the "externalities",
11 so to speak: the general public value of the product, of
12 public interest, of 501(c)(3) organizations, which is
13 recognized, so to speak, through the legislative process
14 by setting them up with special advantages in other areas:
15 the tax area; the Postal area; for example. The Postal Rate
16 area.

17 Second: The fact that, by and large -- for a
18 large fraction of them, at least -- they tend to contribute
19 to a lessening -- albeit a very small lessening -- in the
20 uneven distribution of wealth; and

21 Third: The demonstrable social value of having
22 non-private interest information made available to decision
23 makers and the public.

24 That is the rationale.

25 COMMISSIONER LACY: So you are not making any assumption

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 that that would be harmful to authors, and so on, as
2 you assumed on the first one. It is not a substitute for
3 subscriptions.

4 DR. FERGUSON: Certainly that might be a substitute
5 for subscriptions but, nevertheless, it is not likely to be
6 harmful to most of the authors.

7 COMMISSIONER LACY: Well, I don't see any limitation--at all--
8 on the number, or quantities, or mode of reproduction--as long
9 as it is not for re-sale -- by a 501(c)(3) organization.

10 DR. FERGUSON: We have not thought in terms of
11 numbers. It might be worth thinking about whether there
12 should be a cut-off in terms of numbers.

13 I think it is fair to say that we have not
14 thought of it.

15 COMMISSIONER LACY: New York University, I think, is a
16 501(c) organization.

17 DR. FERGUSON: I doubt that it is a 501(c)(3)
18 organization.

19 COMMISSIONER LACY: I am not sufficiently familiar with
20 those definitions. But assuming that it is, could it
21 reproduce, in printed form, 2,000 copies of a text book
22 and distribute it to its students?

23 DR. COWLAN: It would be totally uneconomic for
24 it to do so.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER LACY: If they could make photocopy plates

2 they could do it for half the price--not having to pay
3 the author, not having to pay for typesetting; not having
4 to pay for marketing.

5 COMMISSION KARPATKIN: Professor Ferguson, I think
6 your stroke might just be too broad on this issue and, in
7 light of Mr. Lacy's questions, may require some further
8 refinement.

9 You used the word "personal use", and you used
10 the word "re-sale".

11 You don't seem to deal with the question of
12 redistribution, not for personal use, and not for re-sale.
13 I think that is an area which you would have to look at
14 further, because, in fact, it is possible -- and I think
15 that Commissioner Lacy had a good analogy here -- for
16 the American Association of Retired Persons to redistribute
17 a total publication -- News Week, say, or Time Magazine,
18 or Consumer Reports -- to its entire membership which, I
19 think, numbers in the hundreds of thousands. And that would
20 be a market which, by and large, could subscribe, or would
21 subscribe--but for the fact of its free availability.

22 I think that your study has to consider that
23 question of redistribution -- not for purposes of advocacy,
24 but for some other purpose. That is one of the refinements
25 that I think you will have to look at.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Another one which you may want to look at is the
2 question of the extent of the photocopying; whether it is
3 photocopying in total or for just a portion of the work.

4 I think there may be some distinctions available, if the
5 photocopying is for the use of a particular part of a work,
6 rather than to reproduce the entire, say, magazine or book,
7 for whatever purpose. So that is an additional refinement.

8 I also think you have to, perhaps, take another
9 look at the analogy that you draw -- even though I think it
10 is a good working analogy -- as to benefits conferred on
11 501(c)(3) organizations with respect to taxes and Postal
12 rates, because both taxation and Postal revenue involve
13 revenue to the government, whereas what you are talking
14 about now is revenue to a non-governmental interest.

15 I think that is a question that you have to at least
16 look at--however you come out on it.

17 DR. FERGUSON: Okay. I think those are good points!

18 COMMISSIONER DIX: You used the word, a minute ago, that I
19 think is the key here. That is the number of copies made
20 at a particular time.

21 I can now almost say -- this controversy has
22 been going on so long-- the traditional library position
23 has never been in favor of unlimited multiple copying and
24 distribution, but in favor of single copies made for
25 individuals -- students and scholars.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 DR. FERGUSON: I think that Ms. Karpatkin's
2 point that we use personal use and other than re-sale
3 as being synonymous -- I think that that is some of what you
4 are driving at, Mr. Lacy -- requires re-examination.

5 Then the other points that you made are also
6 good points.

7 Let me say one thing. I want to repeat that the
8 question of permission in no way arises in connection with
9 our conclusion. We are talking only about royalties -- no
10 other aspect of copyright.

11 COMMISSIONER PERLE: First a comment, generally.

12 In all of this discussion of monopoly, I think
13 we may be falling into a semantic trap.

14 Copyright has traditionally been described by
15 writers, by commentators -- and before this Commission --
16 as a "limited monopoly." Maybe -- just maybe -- we ought to think
17 about copyright as a limited form of private ownership, of
18 private property, because if we look at it in that light, we
19 may come to some very different conclusions -- at least by
20 analogy.

21 A copyright is private property.

22 It is a form of intangible private property.

23 The limited monopoly is not a limited monopoly but
24 rather a limited right of certain portions of the consuming
25 public to divest the owner of his dominion of that personal

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 property.

2 Looked at in that light, we may be a little
3 offended at some of the "fair use" doctrines that are
4 espoused by various witnesses before us. We come to some funn
5 moral conclusions: If I own an automobile, and I can
6 afford that automobile, and someone else wishes to get
7 from Point A to Point B, does he have the right to take
8 that automobile from me for that limited purpose?

9 The answer follows, "No. At least not without my
10 permission."

11 What is the distinction between an automobile
12 and a copyright?

13 There are substantial differences but, at least,
14 let's start thinking somewhat the other way, instead of
15 this dirty word, "monopoly". Let's start thinking in
16 ownership terms.

17 Then we get to the other thing, which is the note
18 that runs through both the photocopying and the computer world
19 -- and the reaction of PISA--which seems today to be the
20 common strain, that people's use of other people's copyright
21 material should be geared into not the principles of law,
22 not the overriding principles of law, but rather, their
23 ability to pay. And I think that is very much part of your
24 testimony today.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 Just as a final, somewhat extraneous, point:

2 I think if there are more of these conferences, what
3 I am interested in learning is:

4 What is the impact of photocopying?

5 What is the bulk of the considerations of photo-
6 copying and computers upon the public interest, not upon
7 the 501(c)(3) organizations. On the general public.

8 COMMISSIONER LACY: I have a couple of very brief questions
9 and comments.

10 One of the suggestions, as I recall it, was that
11 large corporations should not be able to obtain copyright
12 in computer software.

13 Am I quoting you correctly?

14 DR. FERGUSON: No. "Large hardware manufacturers"

15 COMMISSIONER LACY: There are, of course, monopoly
16 questions that can be dealt with under the Anti-Trust laws.
17 I think there are grave problems about using Copyright laws
18 as substitutes for Anti-Trust laws.

19 DR. FERGUSON: We are not intending that, at all.

20 Somehow, we have failed completely to communicate --
21 if that is what you heard.

22 We are saying:

23 (1) That the purpose of a copyright -- the social
24 purpose of a copyright -- is to stimulate an increase
25 in supply.

1 (2) That to the extent that there is a monopoly
2 in a market, the increase in supply, responsive to any
3 given increase in revenues, will be less than in a competitive
4 market.

5 That is all we are saying. And, therefore,
6 granting copyrights in instances of monopolized markets
7 -- not of monopolized items; of monopolized markets -- does
8 not accomplish the Constitutional purpose.

9 COMMISSIONER PERLE: What is a monopolized market?

10 DR. FERGUSON: One where entry is difficult; and is
11 difficult as a consequence of some kind of institutional or
12 technological barrier.

13 COMMISSIONER PERLE: Give me an example of a barrier.

14 MR. BRESLOW: IBM has dominance in the computer hardware
15 manufacturing industry.

16 COMMISSIONER PERLE: You are talking within the copyright
17 area?

18 MR. BRESLOW: This comes into it, in the case of
19 software. Their dominance in hardware also gives them
20 a great deal of input into the software.

21 COMMISSIONER PERLE: You are talking about monopoly in the
22 Anti-Trust sense -- not monopoly in the copyright sense.

23 DR. FERGUSON: No. Monopoly in the economic sense --
24 being a restriction on the supply response; a restriction on
25 the opportunity, or the reality, for increasing supply

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 in response to an increase in demand; or revenues.

2 COMMISSIONER LACY: Does this apply to IBM, or any manufacturer,
3 no matter how small--in hardware -- particularly micro-
4 computer; or process; or a piece of auxiliary ancillary
5 equipment?

6 MR. BRESLOW: I think there are seven hardware
7 manufacturers in the United States, each of which has more
8 than 2% of the market.

9 COMMISSIONER LACY: So you would say that those seven,
10 by name, should not be able to get copyrights?

11 MR. BRESLOW: Probably not by name--but by a percentage
12 of the market.

13 COMMISSIONER LACY: Two percent of the market?

14 What would you say ^{if} a publishing house had
15 three or four percent of the market?

16 MR. BRESLOW: We did not say anything specifically.
17 IBM, itself, has something like 70% of the market.

18 COMMISSIONER LACY: You are just talking about IBM.
19 You are not giving the small competitors a chance to
20 compete with IBM by getting revenue from the royalty program?

21 MR. BRESLOW: Well, what we are suggesting is
22 that it would be a desirable trend in the industry -- which
23 tends to be occurring anyway -- that we would hasten to
24 encourage that the hardware manufacturers not be engaged in
25 the production of software at all.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER LACY: Do you think it is useless, and that
2 they should not produce software? That software has no
3 social value, and they should not produce it?

4 DR. FERGUSON: If it had no social value, they
5 could not sell it; so, of course, it has some social
6 value.

7 COMMISSIONER LACY: It could be reproduced from their own,
8 if they had no protection.

9 DR. FERGUSON: That's right.

10 COMMISSIONER WEDGEWORTH: No matter how you state it, I
11 don't see how you can get away from the assertion that
12 it is a way of using the copyright law to do something
13 which is really an Anti-Trust function. I think it is
14 patently obvious -- which is passing no judgement on whether
15 it is socially desirable or not. It ought to be very clear
16 that that is what is happening.

17 DR. FERGUSON: It seems to me there are a couple
18 of things. There is the basic proposition that I began
19 with that if the market is monopolized, the response that
20 is indicated in the Constitution is at least inhibited, if
21 not precluded.

22 The question is: Given that this Commission has
23 the responsibility for recommending legislation in this area,
24 isn't this fact significant?
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER WEDGEWORTH: Yes, but it is no more significant
2 than it would be for five or seven publishers to totally
3 dominate the publishing industry in this Country to such an
4 extent that it would distort the desirable products that
5 are made available.

6 DR. FERGUSON: Certainly, it would be contrary to
7 my construction -- or our construction -- of the social
8 interest to provide them with an additional instrument
9 for expanding their control.

10 COMMISSIONER LACY: How would you fill this, statutorily?
11 What would you write in the Statute?

12 DR. FERGUSON: We are not writing statutory
13 language.

14 COMMISSIONER WEDGEWORTH: It is not really the function
15 of this Commission to deal with that.

16 MR. LEVINE: But there is an analogy -- if I may --
17 in copyright law to deal with Anti-Trust situations and
18 that goes back to the 1909 Act in which the Aeolian Record
19 Company was buying up the rights of musical compositions
20 and it was feared that they would monopolize the record
21 industry. And the compulsory license was specifically written
22 into the 1909 Copyright Act to deal with that situation.

23 There is at least that analogy in the area.

24 COMMISSIONER LACY: But you are not setting up a class
25 of persons who would be then denied the right available to

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 other people. You are not saying that Messrs. X, Y and Z
2 may not get copyrights, although Messrs. A, B, and C may.

3 You pointed out -- and certainly, it is very
4 difficult to be clairvoyant about the long term future, and--
5 hence we are looking for short term solutions -- unfortunately,
6 we don't have the same opportunity to escape the law and
7 responsibilities as the general pattern of history, in that,
8 once copyright laws are enacted, they stay the law of the land
9 for a century or more.

10 Whatever legal recommendations we make now, if
11 they should be accepted by Congress, would remain the law
12 for a long, long time.

13 You had suggested that the pressures for the
14 changes in the law would be largely to provide new
15 protection. Actually, that is not an accurate statement.
16 The pressures in the course of the Copyright law were almost
17 entirely to provide special exemptions: special exemptions
18 for libraries; special exemptions for certain types of
19 material; special exemptions for a wide variety of organizations.
20

21 I think, by and large, contemporary groups would
22 be content with a law that simply defined the generalized
23 copyright exemptions that could be applied by the
24 Courts in changing times, and in the future.

25 What does frighten me is that experience indicates

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 it is very difficult to get exemptions out of the law, rather
2 than the other way around. The 1909 law had a special
3 exemption for coin operated machines to produce music,
4 because they had in mind the nickel-in-the-slot sort of
5 things that were played. On the basis of that, there came
6 a large juke box industry with quite large
7 revenues to, perhaps, somewhat unsavory aspects of society --
8 without any revenues to the composers whose works were
9 enjoyed.

10 It took three quarters of a century, almost, to
11 get that exemption removed from the law.

12 One of the other things that we need to be
13 concerned with is the change in technology, which is likely
14 to move away from many standard forms of practiced dissemina-
15 tion -- the kinds of dissemination that rely heavily on
16 reproduction on demand.

17 If that reproduction, on demand, can take place
18 without making any contribution to the original cost of
19 creating the product that is reproduced, I think, then you
20 have a situation in which you force governmental subsidy into
21 many activities, and you get a mal-distribution of resources.

22 I think I would feel rather adverse to what
23 you were saying about the freedom from royalties.

24 I don't know whether you had a chance to read Mr.
25 Palmour's report that was presented yesterday.

It was a study of cost factors when a library would find it more economical to subscribe to a journal than to acquire photocopies elsewhere. This was based on a set of calculations, assuming what the library would save on the subscription cost of the journal by relying on photocopying, among other factors, and the cost that would be incurred by getting photocopies was the cost charged by the supplying library.

Now, in point of fact, if a library stops subscribing to -- or refrains from subscribing to -- a journal that costs \$40.00 a year, it is saving \$40.00. All that society is saving is the incremental cost of running one more copy of that journal, and the postage and the mailing and the material. So the social saving might be \$5.00 -- not \$35.00.

The cost the library incurs by getting photocopies is, let's say, \$3.00 to the library involved. I think most libraries agree that the cost to the library providing the photocopies may be eight or ten dollars. So the library is induced by the fact that when it makes a photocopy, it does not pay the true cost of the photocopy, and it makes no contribution to the basic cost of creating the journal, having it written, having it edited, having it set up. It is choosing a course of action economical to itself -- but one that is very costly to society.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1
2
3 I suggest that mal-distribution, of course, may
4 really require the user to make some contribution to the
5 first costs.

6 It probably does not matter much in a situation
7 where there is a marginal, or peripheral, situation. But
8 if we set up a legal structure -- based on an immediate
9 situation -- that carries forward into a day when the
10 distribution of journals very heavily takes place; where
11 more people get articles by on-demand photocopying than
12 see it in the original journal; if this is the predominant
13 use, and the entire first costs of the journal are borne only
14 by those that get it into print, you are placing an extra-
15 ordinary cost on the institutions that subscribe to it.

16 You are producing, I think, a false sense of
17 economy in relying on the individual copies.

18 COMMISSIONER WEDGEWORTH: Let me beg to differ with you --
19 with the analysis that you just made.

20 I think that is sort of a misconception that is
21 given about journal subscriptions. That is; that the cost
22 of the subscription is significant in comparison to
23 other costs of handling that subscription; storing it;
24 and retrieving it on occasion for the various users.

25 COMMISSIONER LACY: I said many other costs.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER WEDGEWORTH: That is the point I want to make --
2 because it is not an exaggeration. These costs are the ones
3 that are significant; not what the library saves on the
4 actual subscription cost, itself. It works conversely--
5 such that a decision to subscribe to a given journal or
6 periodical is a much more serious decision than buying a
7 monograph, because you are buying the incremental costs
8 that go on for years.

9 COMMISSIONER LACY: We are not disagreeing with that, at all.

10 COMMISSIONER WEDGEWORTH: I just want to correct it for the
11 record.

12 I said that there were many other costs besides the
13 cost of the subscription.

14 COMMISSIONER LACY: I am saying that the saving made with
15 a subscription is greatly over-stated because society does
16 not save the \$40.00 which is the subscription rate.

17 COMMISSIONER WEDGEWORTH: That is true, But the only
18 way to affect the other savings, is to save the cost of
19 the subscription.

20 DR. FERGUSON: If you did assume the cost, you would
21 find out that the cost of the subscription is very high and
22 by emphasizing the cost of the subscription -- as we have --
23 we have probably under-estimated, rather than over-estimated,
24 the social saving.
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 COMMISSIONER WEDGEWORTH: There are a couple of points that
2 I want to make very quickly.

3 One is that I think there are some weaknesses
4 in the conclusions, as they have been indicated by the
5 discussions and I find that the value of the product is
6 more in the framework of analysis that you presented--and
7 the conclusions will certainly need to be confirmed by the use
8 of actual data--in the future. I think that is very
9 significant.

10 But there is a point that I think is important
11 to bring out here, and that is that -- again, talking about
12 the added value of the service, or distributed functions --
13 you have revealed an area that is very closely related-- when
14 you talk about royalties for photocopying-- to arguments
15 which have come up in other Countries, related to royalties
16 for the circulation of items that appear in libraries. And
17 you pointed out that there is a very specious argument being
18 raised because, in order to effect that argument, you have
19 to ignore the added values that these institutions and
20 services provide to the original cost; which would modify
21 the statements that Commissioner Lacy made -- that this is
22 done without a contribution to the original cost of making
23 the product available.

24 In fact, there is a substantial social benefit
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 that results from those added values.

2 COMMISSIONER HERSEY: One very brief comment that I would
3 like to make -- one that I feel is important -- on the
4 computer program part of your report:

5 You acknowledge at one point the fact that,
6 after a certain point, computer programs become part of
7 the mechanical process, but the burden of your report
8 recognized that copyright should be granted to computer
9 programs.

10 The law precludes our granting copyright to
11 processes. I know that you have not seen the very tentative
12 model for alternative legislation that we have since cir-
13 culated, and I was glad to see that -- at least as a kind of a
14 footnote here -- you had kept your mind open about the
15 possibility of another alternative.

16 But I think that one thing that happens is --
17 because this is a highly technical matter -- we tend to blur
18 the real meaning and uses of the computer program. For
19 example, at one point, you say that programming for educational
20 use is intended to communicate not only with machines, but with
21 students. Programs in those circumstances don't communicate
22 with the students. They manipulate material which communi-
23 cates with the students. They don't communicate with
24 students any more than the button on the slide projector does,
25 or the focussing apparatus on a time projector does. They

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 are essentially mechanical. They are much more versatile
2 and complex than the examples that I have given, but they
3 are simply mechanical; and it is for this reason that I
4 believe that a computer program should be dealt with under
5 a different form of protection or copyright.

6 MR. BRESLOW: In looking at the available options,
7 they did not appear to be any different in substance from
8 copyright that you would want to give to software, whether
9 you call it copyright, or not. Copyright seems to be some-
10 thing that would be desirable to have for software and there
11 would be no other real alternative. We would have no objection
12 to putting it under a separate title of the law, and calling
13 it something else, but the substance of the type of protec-
14 tion that you would be giving would be still the same.

15 If, for instance, having a separate title would
16 make it simpler, administratively and politically, to have a
17 different term of protection for software than other copy-
18 righted materials, I don't see any objection to that.

19 JUDGE FULD: Does that complete the questions?

20 Shall we have a discussion among ourselves?

21 MR. HAVERKAMP: I want to give a brief response to
22 Mr. Perle's comments. What he said, I thought, was very
23 useful to the arguments on the other side of

24 Mr. Lacy's -- relating to public interest, in
25 general.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 The assumption that using Mr. Perle's car in going from
2 Washington to San Francisco is somewhat analogous and similar
3 to photocopying an article or a journal that I read in the
4 library is a mistake. These are not the
5 same thing, or even analogous. For one thing, photocopying
6 is not the source of the amount of appropriatability of the
7 publisher's cost. I don't know if we have made that clear,
8 or not. Free lending libraries, themselves, give multiple
9 users a chance to use a publisher's output, again, and again.
10 It doesn't really matter if a person checks out a copy of
11 a journal and reads it, or sits there and reads it, or
12 takes it to the appropriate machine and photocopies it.

13 There is still the opportunity for multiple use, there's no
14 matter what he does with it. For some reason -- I think it
15 is probably because it is easiest to get revenues from the
16 photocopying sector, from the photocopying consumers -- that the
17 photocopying industry has been blamed for this. Really, it
18 originates with the free lending libraries. Publishers
19 realize it is a big mistake to attack free lending libraries,
20 so they go after the photocopying, somewhat erroneously.

21 COMMISSIONER PERLE: If we could get people thinking, perhaps,
22 in ownership terms rather than monopoly terms, then we are,
23 I think, walking down a road toward rationality.

24 MR. HAVERKAMP: I am certainly not against walking
25

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 down a road of rationality.

2 COMMISSIONER LACY: Along those lines, I think publishers
3 or authors have never said that nobody should be able to
4 use anything without paying a toll. If they had ever said
5 that there should not be free lending libraries--if they
6 had ever said that libraries should not do any photocopying--
7 if they had said that libraries should not do the kind of
8 photocopying that most libraries do. If they tried to
9 exercise a blanket control over that, that would be foolish;
10 and non-productive; and an unrealistic thing.

11 I think, similarly, when one suggests that there
12 should be no restraints in this, ^{that} the thing should be wide
13 open--that is an equally unproductive contribution.

14 I think we all recognize the fact that there is a
15 rule of reason; there is a question of balance; there is a
16 question of concern; and no blanket exemptions, sweeping
17 away copyrights, would be useful.

18 MR. COWLAN: I would like to express a concern,
19 which I have alluded to earlier. My fear, however, is that
20 the numbers of copies become the criteria for access to
21 critical or essential information.

22 One of the organizations that we work with in
23 some of our satellite experimentations -- the South Dakota
24 Indian Association -- I suspect there is a free library in
25 Rapid City, but I know full well that to get from Rapid City

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PAGE (202) 347-0224

1 to Wounded Knee, South Dakota can in the winter take me hours
2 of driving a four-wheel drive truck. Sometimes--if you are
3 lucky--you get there.

4 There are a number of other reservations scattered
5 around the area. There is a highschool on one way out but all the
6 libraries are in Rapid City.

7 Where do you draw the line, in humanistic terms?

8 Where do you draw the line in costs -- not to
9 publishers; not to government -- but in total cost to
10 society as a matter of cost benefit? I am not talking about
11 cost-effectiveness. Probably one of the greatest problems
12 that PISA had was the economic approach to this entire
13 problem. There is no way, for the life of me, that I can
14 attempt to assign to education, an economic cost effective-
15 ness equation, because my definition of education has to do with
16 improving the quality of human life; and I don't know how to
17 put a price tag on that.

18 I would urge that you read what I found to be
19 a very moving piece -- a moving article -- and I did not even
20 touch on it. It was submitted to us by the National
21 Association of Health Care Centers. This is a group that
22 serves Chicano migrant farmers and other indigents with
23 health care information. They use copyrighted material almost
24 exclusively because they don't have the money to produce it.
25 They take it where they can get it, and shove it out as fast

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHO JE (202) 347-0224

1 as they can, in the hope that people will read it and will
2 learn something that will help them alleviate medical or other
3 problems--or in a life threatening situation.

4 At what number would you draw the line?

5 How many copies should they be allowed?

6 Or how much should they pay out of a budget that
7 they don't have?

8 Now, it is true that an organization like that is
9 funded largely by the federal government; and it would seem
10 to me that one piece of economics that needs to be done is to
11 take a look at the cost of a federally-subsidized or other
12 subsidized program -- whether it be a foundation, a state
13 grant, or a local grant organization -- which is performing a
14 public service function to other people who may, in this case,
15 be on welfare.

16 Take a look at the total costing of this thing as
17 against the question of: Should the ultimate user have to
18 pay a copyright fee and come out with some kind of balance,
19 as to which costs society more, or less?

20 It is a complicated equation; but I can't think of
21 any other way to deal with hardship problems. I am not really
22 concerned with somebody ripping off a copy of the Journal
23 of whatever -- Radiological Chemistry, or whatever -- in the
24 NYU Library. I am concerned with the citizens, consumers,
25 and public interest groups, many of which -- were you to

1104 CARRY BUILDING
927 FIFTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1 charge a fee -- I fear you would have to close them down,
2 because they would be in violation. They would not pay
3 because they can't pay.

4 JUDGE FULD: What do they do now?

5 DR. COWLAN: They rip it off. They don't pay.
6 Some of them are more careful than others. They know that
7 they are probably violating even fair use as it exists.
8 The only alternative is to close them down.

9 COMMISSIONER PERLE: As a matter of fact, we have a discussion
10 of that, somewhere. I wonder if that assumption is correct.
11 I don't know what happens in Wounded Knee, South Dakota.
12 I have a very strong feeling that everything that is done in the
13 photocopying world out there is probably that which is pretty
14 nearly legal, right now.

15 What we are talking about -- what we are really
16 concerned with -- is systematic, multiple copying on a regular
17 basis, and you are talking -- I am quite sure -- about
18 isolated examples.

19 DR. COWLAN: I wish I were.

20 Let me come back to the National Association of
21 Health Center. That is systematic. It is a program. It is
22 in large numbers, and it is being done right now. All that
23 I am asking is that some consideration be given there.

24 JUDGE FULD: You may rest assured that consideration
25 will be given.

1104 CARRY BUILDING
927 FIFTEENTH STREET, N.W.
WASHINGTON, D.C. 20005

MILLER-COLUMBIAN REPORTING SERVICE
RECORD-MAKING PROFESSIONALS

PHONE (202) 347-0224

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

DR. COWLAN: That is my only plea.

JUDGE FULD: Do any of the Commissioners wish to
say anything more?

MR. LEVINE: I have one brief announcement.

COMMISSIONER PERLE: Could we go into a short Executive
Session?

JUDGE FULD: Yes. We will recess and then go into
Executive Session.

(Whereupon, the reported portion of the meeting
was concluded at 12:45 p.m.)

-oOo-